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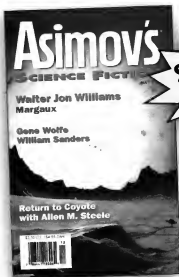
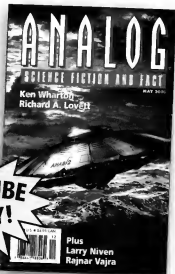
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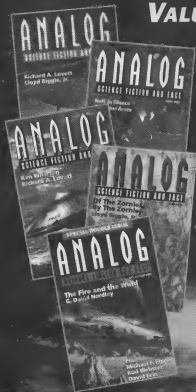
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SEPTEMBER 2003

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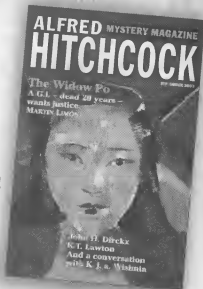


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THE CLEVE CARTMILL AFFAIR: ONE

One anecdote out of science fiction's history that almost everyone has heard of is the tale of how Cleve Cartmill, a competent writer of middling abilities, published a story describing the workings of the atomic bomb in a 1944 issue of John Campbell's magazine *Astounding Science Fiction*, fourteen months before the first successful atomic explosion at the Alamogordo testing grounds, thus causing a Federal security agency to investigate both Cartmill and Campbell to see if there had been a leak of top-secret military information.

The story has taken on some of the characteristics of an urban legend by now. But it really did happen. I have the official file of the investigation right on my desk today. It was declassified in the summer of 2001, and Michael Ravnitsky, a journalist who works with an outfit called American Lawyer Media in Washington, applied for it from the U.S. Army Intelligence and Security Command under the Freedom of Information Act and shared it with Gordon Van Gelder, the editor of *Fantasy and Science Fiction*, who kindly made a copy of it available to me. (Mr. Ravnitsky has made something of a specialty of obtaining recently declassified government files involving SF people—Isaac Asimov, Philip K. Dick, Robert A. Heinlein, and Hugo Gernsback among them. He's even been able to get the files of Project Moon Dust, a UFO-connected enterprise whose existence

the Air Force long denied.) It is with Michael Ravnitsky's permission that I share the Cartmill story with you now.

The file opens with a blurrily reproduced letter from John Campbell (based in New York) to Cleve Cartmill (who lived in Manhattan Beach, California) dated August 16, 1943. Cartmill had evidently proposed writing a story about a super-bomb. After complaining that he has hardly any stories in his inventory, having lost most of his best contributors to the war effort—Cartmill, who was partly paralyzed, was ineligible for military service—Campbell responds to a proposal from Cartmill for a story based on the idea of using atomic weapons in warfare, telling him that it is "fact, not theory," that researchers have used "new atomic isotope separation methods" to produce a supply of fissionable U-235. "They have quantities measured in pounds. They have *not* brought the whole amount together, or any major portion of it. Because they are not at all sure that, once started, it would stop its reaction until all of it had been consumed. . . . They're afraid that that explosion of energy would be so incomparably violent . . . that surrounding matter would be set off. . . . And that *would* be serious. That would blow an island, or hunk of a continent, right off the planet. It would shake the whole Earth, cause earthquakes of intensity sufficient to do damage on the other side of the planet, and utterly de-

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stroy everything within [thousands of] miles of the site of the explosion."

Heady stuff, right? It might lead one to think that John Campbell had a pipeline right into the nascent Los Alamos, New Mexico laboratory of the Manhattan Project, where a team of scientists led by J. Robert Oppenheimer was then trying to master the task of controlling an atomic explosion. But in fact he'd simply been reading the technical journals, where all sorts of articles on nuclear fission and chain reactions had been published since 1940.

Campbell, not only a great editor but a superb writer himself, suggested to Cartmill that one way to handle the theme might be to postulate a war on some other planet between powers comparable to the Axis (Them) and the Allies (Us) of World War II, in which the Axis, facing defeat, had decided to set off an experimental A-bomb regardless of consequences. "I think the story would be the adventure of the secret agent who was assigned to save the day—to destroy that bomb."

Cartmill replied a few days later, asking Campbell a few technical questions: "Wouldn't the consequent explosion set up other atomic imbalances, which in turn—and so on, until the whole damned planet went up in dust? . . . How do you control the explosion time of such a bomb? Isn't it, once it has been assembled, trying each instant to blow itself apart? . . . In other words, where's the trigger or fuse? . . . You see, I want to know how to make a U-235 bomb, so that I'll know how to destroy it, because I think that will be highly entertaining reading. Keeping an eye, of

course, on what should or should not be told for social, military, or political reasons."

So Campbell, in the next letter, told Cartmill how to construct an A-bomb, how it would be triggered, and what the probable consequences of an atomic explosion would be. Cartmill wrote the story, "Deadline," and Campbell used it in his March, 1944 issue, which went on sale in early February. It was not a particularly distinguished story. It was, in fact, a klutzy clunker. We have already seen that Campbell was desperate for material in the fall of 1943. (Cartmill had cleverly disguised the Allies and Axis of his imaginary world by calling them the "Seilla" and the "Sixa." The main contending countries were "Ynamre" and "Ytal" on the evil Sixa side and "Acireb" and "Aissu," though not, oddly, "Niatir," among the Seilla.) The readers rated it last, sixth out of six stories, in the monthly story-popularity poll that Campbell conducted.

For all its flaws, however, it remains Cleve Cartmill's best-known story, overshadowing such nicely done fantasy novellas as "Bit of Tapestry" (1941) and "Hell Hath Fury" (1943). It is, in fact, the only one of his that anyone but a dedicated scholar of the field would likely be able to name today. The reason is very simple. There is this paragraph, quoted virtually verbatim from John Campbell's letter of August 16, 1943:

U-235 has been separated in quantity easily sufficient for preliminary atomic-power research, and the like. They got it out of uranium ores by new atomic isotope separation methods; they now have

quantities measured in pounds. By 'they,' I mean Seilla research scientists. But they have NOT brought the whole amount together, or any major portion of it. Because they are not at all sure that, once started, it would stop before all of it had been consumed—in something like one micromicrosecond of time.

And also this one:

Two cast-iron hemispheres, clamped over the orange segments of cadmium alloy. And the fuse—I see it is in—a tiny can of cadmium in a beryllium holder and a small explosive powerful enough to shatter the cadmium walls. Then—correct me if I'm wrong, will you?—the powdered uranium oxide runs together in the central cavity. The radium shoots neutrons into this mass—and the U-235 takes over from there. Right?

Someone in Washington happened to read the March, 1944 *As-tounding*. And then the fun began.

On March 8th Arthur Riley, an investigator from the Counter-Intelligence Corps of what was then called the War Department, turned up at Campbell's office and demanded to know the source of the

information used in the Cartmill "article." The copy of the agent's report, dated April 13, has Campbell's name carefully whited out, but says that "the editor of this magazine assumed full responsibility for whatever technical disclosures appeared therein. He stated he wrote to Cleve Cartmill requesting him to write a fictional (imaginative) story around the technical material contained in the story and that Cartmill had no technical knowledge whatever." Campbell asserted, Riley said, that "the subject of Atomic Disintegration was not novel to him, since he had pursued a course in atomic physics at Massachusetts Institute of Technology in 1933."

But that wasn't enough to allay the agent's suspicions. Campbell's contention that he had learned all about nuclear physics in college "would appear to justify his explanation that it was purely coincidental," Agent Riley wrote, though I suspect he would have been disturbed to learn that Campbell had flunked out of MIT in his sophomore year, 1931. But in any case, he added, "in the opinion of informed persons the story contains more than just an academic course

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in atomic physics revealing as it does certain things developed since 1940. The theoretical use of boron unless it was coincidental is indicative of quite recent information."

Campbell provided the Military Intelligence man with Cartmill's address—in *Manhattan Beach*, California. The link to the top-secret Manhattan Project based in Los Alamos was too obvious to overlook. Riley sent word to the California branch office of Intelligence that Cartmill should be placed under immediate surveillance; plainly he knew too much about our hush-hush A-bomb research. Who had tipped him off? Both Cartmill and Campbell would need further watching.

And before long it began to seem as though a whole network of science fiction writers might be involved—a chain of conspirators. For example, the report continues, "It is established that Cartmill is very friendly with [], Retired U.S.N.R., who is associated with [] at the Philadelphia Navy Yard. This [] formerly was doing research work at Columbia University, and he is said to have accepted

some material thought to be atomic copper from [] in order to measure it in the mass spectroscope at Columbia University. [] was advised by [] that the device was broken. He never received the material back from []. One [] who has written for [] Magazine is said to be working with [] also. The possibility of the transmittal through [] to Cartmill has not so far been resolved. . . ."

Well, now it can be told, and you are quite familiar with the names of these sinister people. The retired naval man was Robert A. Heinlein. His Philadelphia Navy Yard associate, the former Columbia man, was Isaac Asimov. The one who sent the copper to Asimov and never got it back was Will F. Jenkins, who wrote science fiction under the pseudonym of Murray Leinster. The blanked-out magazine was *Astounding*, and the other writer working at the Navy Yard with Heinlein and Asimov was L. Sprague de Camp.

Were all four of these great masters of science fiction slipping nuclear secrets to Cleve Cartmill? We'll find out next month. ○

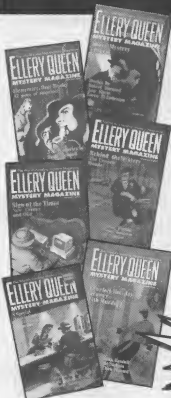
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A windy day.
A red '67 Corvette.
One catamaran.
Some redwood trees.
Wrigley Field.
Two saddle horses.
A Wurlitzer jukebox.
A Texas style barbecue.
The harvest moon.

—G.O. Clark



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17TH ANNUAL READERS' AWARD RESULTS

It's time to tell you the winners of the *Asimov's Science Fiction Annual* Readers' Award poll, which is now in its seventeenth year. As always, these were your choices, the stories and artwork and poetry that you—the readers—liked best out of all the stuff we published in 2002. The readers were the only judges for this particular award—no juries, no experts—and, as always, it's intriguing to compare results with the Hugo and Nebula ballots, as well as with the readers' poll conducted by *Locus*. This year's winners, and runners-up, were:

BEST NOVELLA

1. **BREATHMOSS**; IAN R. MACLEOD
2. *Glorious Destiny*; Allen M. Steele
3. *With Caesar in the Underworld*; Robert Silverberg
4. *The Potter of Bones*; Eleanor Arnason
5. *Stories for Men*; John Kessel
6. *Router*; Charles Stross
7. *Across the Eastern Divide*; Allen M. Steele
8. *A Speaker for the Wooden Sea*; Ian Watson
9. *Veritas*; Robert Reed
10. *Ring Rats*; R. Garcia y Robertson

BEST NOVELETTE

1. **THE WILD GIRLS**; URSULA K. LE GUIN
2. *Hanuman*; Kage Baker
3. *Halo*; Charles Stross
4. *War, Ice, Egg, Universe*; G. David Nordley
5. *The Likely Lad*; Kage Baker
6. *Madonna of the Maquiladora*; Gregory Frost (tie)
6. *Lying to Dogs*; Robert Reed (tie)
7. *Oracles*; Robert Reed
8. *Free Floaters*; Brenda Cooper and Larry Niven
9. *The Second Wave*; Robert Silverberg
10. *Drumlin Boiler*; Jeff Duntemann

BEST SHORT STORY

1. **SHE SEES MY MONSTERS NOW**; ROBERT REED
2. *At Dorado*; Geoffrey A. Landis
3. *The Little Cat Laughed to See Such Sport*; Michael Swanwick (tie)
3. *The Last of the O-Forms*; James Van Pelt (tie)
4. *Knapsack Poems*; Eleanor Arnason
5. *Candy Art*; James Patrick Kelly

6. Lambing Season; Molly Gloss
7. The Banquet of the Lords of Night; Liz Williams
8. The Long Chase; Geoffrey A. Landis (tie)
8. Her Father's Eyes; Kage Baker (tie)
9. Patent Infringement; Nancy Kress (tie)
9. Incandescent Bliss; Howard V. Hendrix (tie)
10. A Slow Day at the Gallery; A.M. Dellamonica

BEST POEM

1. EIGHT THINGS NOT TO DO OR SAY WHEN A MAD SCIENTIST MOVES INTO YOUR NEIGHBORHOOD; BRUCE BOSTON

2. Television Isn't Heaven; Keith Allen Daniels
3. Curse of the Immortal's Husband; Bruce Boston
4. Anachronism; Keith Allen Daniels
5. Arbitrary Night in the University Lab; Bruce Boston (tie)
5. Red Giantess; Steven Utley (tie)
6. Mars Terraformed; Terry A. Garey (tie)
6. Eight Things . . . You Meet the Devil in Hell; Bruce Boston (tie)
7. The Intergalactic Host Program; Laurel Winter (tie)
7. No More Prisons; Tom Disch (tie)
8. Before We Hit Bottom; Alex Irvine (tie)
8. Song and Dance; Steven Utley (tie)
8. A Glimpse of Splendor; Geoffrey A. Landis (tie)
9. Crustaceans; Mary A. Turzillo (tie)
9. Corn Snake; Mary A. Turzillo (tie)
9. The Werewife Wonders About Genetics; William John Watkins (tie)
9. A Record High; Tom Disch (tie)
10. LaGrange Point; Alex Irvine

BEST COVER ARTIST

1. DOMINIC HARMAN
2. Mark Garlick (tie)
2. Fred Gambino (tie)
3. Michael Carroll
4. Joe Tucciarone
5. Patrick Woodroffe
6. Ron Miller (tie)
6. Darryl Elliott (tie)

BEST INTERIOR ARTIST

1. MICHAEL CARROLL
2. Alan Giana
3. Steve Cavallo
4. Broeck Steadman
5. Alan Guttierrez
6. John Stevens
7. Mark Evans (tie)
7. Laurie Harden (tie)
8. June Levine
9. Darryl Elliott
10. John Allemand

As promised, all ballots were automatically entered in a drawing for a free one-year subscription to *Asimov's*. The winner of this year's drawing was Martin Budak from Portland, Oregon.

BOTS

Repeal

Quick! Can you recite the Three Laws of Robotics?

It is a tribute to **Isaac Asimov's** <<http://www.asimovonline.com>> impact on our genre that a fair percentage of you can. And even if you can't quote them verbatim, you probably have a general idea of what they say. (For those who are stumped, I'll pop them in at the end of this column.) But what is interesting about the Three Laws of Robotics, first codified some sixty-three years ago, is that they aren't laws at all. At least, not in the sense that Newton's Three Laws of Motion or the Three Laws of Thermodynamics are laws. Although he was quite proud of coining the term *robotics*, Isaac made no claim to a deep understanding of that field. In his 1983 book *Counting the Eons*, he wrote, "I don't know how robots work in any but the vaguest way—For that matter, I don't know how a computer works in any but the vaguest way, either. I have never worked with either robots or computers, and I don't know any details about how robots or computers are currently being used in industry." Isaac understood full well that his Three Laws of Robotics were literary conceits. He proposed them not to shape future technologies but so he could spin science fiction plots.

Robots have become commonplace at the dawn of the twenty-first century. They build cars and MP3 players. They've visited Mars and the hydrothermal vents deep beneath our oceans. They destroy each other for fun and profit on television. And yes, some are weapons, designed to kill people. You may recall that in November of last year, one of our **Predator** <http://www.space.com/business/technology/technology/x-45_debut_020523.html> robot planes flying over Yemen fired a Hellfire missile at a car, killing six suspected Al Qaeda members.

As I try to keep up with developments in robotics and A.I., I find it increasingly unlikely that any class of robots will ever be subject to Isaac's laws. Indeed, when we touched on the **Singularity** <<http://www.jimkelly.net/pages/singular.htm>> in an earlier installment, we saw that some very smart people believe that machine intelligence will someday surpass our own, making humankind obsolete at best. And you thought **Terminator** <<http://heim.ifi.uio.no/~haakonhj/Terminator/index.cgi>> was just another Schwarzenegger flick.

Real

Robots are everywhere on the march. A great place to begin count-

ing them is **The Cool Robot of the Week** <http://ranier.hq.nasa.gov/telerobotics_page/coolrobots.html> site. Folks at NASA <<http://www.hq.nasa.gov>> have been keeping track of interesting sites devoted to real world robots since 1996. Over the past seven years the site has honored **tattooing robots** <http://www.ananova.com/news/story/sm_718442.html?menu=>, **snake robots** <http://voronoi.sbp.ri.cmu.edu/projects/prj_snake.html> and **Troody** <<http://www.ai.mit.edu/people/chunks/chunks.html>> a robotic dinosaur, to name but a few. Of particular interest to science fiction aficionados is the cool robot site from June 24, 2002: **John Chapin's Lab** <<http://www.rybak-et-al.net/chapin.html>>. Dr. Chapin stunned the world with an experiment in which rats manipulated a robot arm by brain activity alone. Could neural jacking be just around the corner?

Of all the robots we have launched into space, my favorite was the Microrover Flight Experiment (MFEX), better known as the **Sojourner rover** <<http://mars.jpl.nasa.gov/MPF/rover/sojourner.html>>, which rolled out of the Pathfinder lander onto the Ares Vallis on July 5, 1997. This little robot operated twelve times its design lifetime and returned data from a number of experiments, one of which was designed by frequent Asimov contributor **Geoffrey A. Landis** <<http://www.sff.net/people/Geoffrey.Landis>>. And the robots are scheduled to return to the Red Planet; Geoff has recently been selected to be a participating scientist on the **Mars Exploration Rover mission** <<http://mars.jpl.nasa.gov/mer>>, which should launch in June 2003. By the way,

although this is a column on robots, I must pause here to urge you to click the **Pathfinder** website <<http://mars.jpl.nasa.gov/MPF/index1.html>> for some of the most amazing photography of Mars you have ever seen.

As recently as last year there were three different fighting robot shows on cable: **Battlebots** <<http://www.battlebots.com>> on Comedy Central, **Robot Wars** <<http://www.robotwars.com>> on TNN and **Robotica** on The Learning Channel. I must confess that I was never a big fan of these shows, but then I'm not big on pro wrestling either. Apparently I was not alone in my indifference. Although **TV Guide Online** <<http://www.tvguide.com>> assures me that I can find regular *Robotica* reruns on Channel 233 D-HOME, I'm afraid my TV can't count higher than 90. Meanwhile TNN has exiled *Robot Wars* to the wee hours of Sunday morning and *Battlebots* no longer appears on Comedy Central's schedule. All three shows maintain a robust web presence, however, as does the whole community of people who build fighting robots. Check out **RobotCombat.com** <<http://www.robotcombat.com>> if you're interested in homebrew bots. There you'll find a schedule of competitions, links to parts providers and a history of robotic combat.

I would be remiss were I not to mention the **Honda Robot Top Page** <<http://world.honda.com/robot>> devoted to its prototype humanoid robot. According to Honda, engineers came up with the name for this bot by taking the first letters of Advanced Step in Innovative Mobility. That's right, friends, C3PO's great-great-great-grandfather is named ASIMO. He's (he?) a

cute little guy, weighing in at about ninety-five pounds and standing just under four feet tall. He looks sort of like an Imperial Storm Trooper from the first **Star Wars** <<http://www.starwars.com>>, only rounder and with bigger feet. He is one of the most accomplished two-legged walking bots ever made: he can take big steps and baby steps, vary his pace, step side to side, change direction while he's walking and negotiate stairs. If you lived in Japan you could rent him for your trade show. But as impressive as ASIMO is, he's a long way from R. Daneel Olivaw, more's the pity.

Another recommended click is **OnRobo** <<http://www.onrobo.com>>, which bills itself as "Your Home and Entertainment Robotics Resource." This is an eclectic site with robot news from around the world as well as reviews of games and books and movies. It also features links to merchandise you can buy *right now*, from robot lawnmowers and vacuum cleaners to Lego's excellent **Mindstorms Robot Invention System** <<http://mindstorms.lego.com>> to Oshkosh long underwear with bright robot patterns. One cool feature of OnRobo is that it gives consumers a chance to weigh in with reviews of science fiction's Greatest Robot Hits, from Isaac's classics to the Terminator flicks.

unreal

Media fans are advised to head straight for Fred Barton Productions Inc's **Robby the Robot** <http://www.the-robotman.com/nv_fs.html>, named for the scene-stealing automaton from the movie **Forbid-**

den Planet <<http://sfstation.members.easyspace.com/fbhome.htm>>. Mr. Barton's site makes the grand claim that he is internationally known as "The Robot Man," and he delivers the goods. Literally. Mr. Barton will sell you an exact 1:1 scale replica of Robby that "incorporates a digital audio soundtrack from the movie that lights the nine mercury-vapor neon tubes in his mouth synchronously with the robot's original voice as heard in the film." Oh, man, my inner nine-year-old is pitching a fit! *CanIhaveonepleasepleasepleasecanIpleasecanI?* Elsewhere on the site is "The Amazing Robot Museum," which traces the history of robots in movies from the 1920s to the present. About the only part of this very cool site that disappoints is the links page. There are but two, one of which is for The Robot Hut.

Although not as slick as Fred Barton Productions, **The Robot Hut** <<http://www.robohut.robotnut.com>> is funky and fun. Reading between the HTML, it would seem to be the work of one John Rigg, who has built for himself the largest private robot museum in the world. You see the actual Robot Hut on the index page, a big red barnlike structure that has been photoshopped into an alien landscape. Elsewhere on the site you can tour The Robot Hut in 3D—you provide the glasses—and watch videos of clanking, talking, laughing, smoking, singing robot toys and models. You can even arrange for a visit, although I take it that The Robot Hut is not open to the general public. Oh, and the links page here is very good; it even includes a source for free 3D glasses!

A much sillier robot site is **We**

Are Robots <<http://www.wearerobots.com>>, which features some hilarious flash movies about a group of cartoon robots who harangue the viewer about their personal problems. I liked Sad Robot, a morose real estate salesman, and Keg-O-Matic, the clueless college bot, but my fave was Angrybot. Imagine a metal middle linebacker painted hellfire red with the voice of one of Tony Soprano's less genteel henchpersons as you read this bit of his rant, "All the time people are telling me to shut up and you know what I say to them, I say, no, I don't shut up, you shut up and then I would spit on them only I can't because I'm a robot but I make a spitting noise like *ptui*, *ptui*, like that. (pause) My job? I'm a high school music teacher, so what?" All of the bots are the creations of designer and animator Brian Frisk.

exit

Here are Isaac Asimov's Three Laws of Robotics:

1. A robot may not injure a human being, or, through inaction, al-

low a human being to come to harm.

2. A robot must obey the orders given it by human beings, except where such orders would conflict with the First Law.

3. A robot must protect its own existence, except where such protection would conflict with the First or Second Law.

You may be surprised to learn that there is some question whether Isaac actually penned his own laws! To clear this up, I think it is only just that the Good Doctor have the last word. Here is Isaac's account of a fateful conversation that took place on December 23, 1940, quoting once again from *Counting the Eons*:

"It wasn't, however, till 'Run-around,' my fourth robot story, that it all came together in the Three Laws in their present wording, and that was because John Campbell, the late great editor of *Astounding*, quoted them to me. It always seemed to me that John invented those Laws, but whenever I accused him of that, he always said that they were in my stories and I just hadn't bothered to isolate them. Perhaps he was right." ○



LOOKING THROUGH LACE

Ruth Nestvold

In real life, Ruth Nestvold travels around the world in the service of a big three-letter corporation. In her less real life, she writes science fiction, fantasy and hyperfiction, and has sold stories to *Asimov's*, *Strange Horizons*, and *NFG*.

She is currently working on a pseudo-fantasy novel of epic proportions set in imaginary fifth century Ireland and Britain. She maintains a web site at www.ruthnestvold.com.

Toni came out of the jump groggy and with a slight headache, wishing the Allied Interstellar Research Association could afford passage on Alcubierre drive ships—even if they did collapse an unconscionable amount of space in their wake. For a moment, she couldn't remember what the job was this time. She sat up and rubbed her eyes while the voice on the intercom announced that they would be arriving at the Sagittarius Transit Station in approximately one standard hour.

Sagittarius. Now she remembered. The women's language. Suddenly she felt much more awake. She was on her way to join a first contact team for the first time, and she had work to do. She got up, washed her face in cold water at the basin in her compartment (at least AIRA could afford private compartments), and turned on the console again, calling up the files she had been sent when given her assignment to Christmas.

"List vids," she said. It was time she checked her theoretical knowledge against the real thing again. She'd had just over three weeks to learn the Mejan language, one week on Admetos after getting her new assignment and two weeks in transit. From the transit station it would be another week before she finally set foot on the planet. Even with the latest memory enhancements, it was a daunting challenge. A month to learn a new language and its intricacies. A month to try to get a feel for a culture where women had their own language that they never spoke with men.

That had been her lucky break. Toni was the only female xenolinguist in this part of the galaxy with more than a year's experience. And suddenly she found herself promoted from grunt, compiling grammars and dictionaries, to first contact team.

She scrolled through the list of vids. This time, she noticed a title that hadn't caught her attention before.

"Play 'Unknown Mejan water ritual.'"

To judge by the AIC date, it had to be a video from one of the early, pre-contact-team probes. Not to mention the quality. The visuals were mostly of the bay of Edaru, and the audio was dominated by the sound of water lapping the shore.

But what she could see and hear was fascinating. A fearful young hominid male, tall and gracile, his head shaved and bowed, was being led out by two guards to the end of a pier. A small crowd followed solemnly. When they arrived at the end, another man stepped forward and, in the only words Toni could make out clearly, announced that Sentalai's shame would be purged. (Assuming, of course, that what had been deciphered of the men's language to this point was correct.) The older man then motioned for the younger man to remove his clothes, fine leather garments such as those worn by the richer of the Edaru clans, and when he was naked, the two guards pushed him into the water.

Three women behind them conferred briefly. Then one of the three stepped forward and flung a length of lace after the young man.

Toni stared as the crowd on the pier walked back to shore. She could see no trace of the man who had been thrown in the water. According to her materials, the Mejan were excellent swimmers, growing up nearly as much in the water as out, and it should have been easy for him to swim back to the pier. But for some reason he hadn't.

It reminded her of nothing so much as an execution.

The entry bay of the small space station orbiting Christmas was empty and sterile, with none of the personal details that a place accumulated with time, the details that made it lived-in rather than just in use. Toni was glad she would soon be moving to the planet's surface. Blank walls were more daunting than an archaic culture and an unknown language anytime.

Two men were there to meet her, and neither one was the team xenolinguist.

The elder of the two stepped forward, his hand outstretched. "Welcome to the *Penthesilea*, Dr. Donato."

"Thank you, Captain Ainsworth. It's a pleasure to meet you. And please, call me Toni."

Ainsworth smiled but didn't offer his own first name in exchange. Hierarchies were being established quickly.

"Toni, this is Dr. Samuel Wu, the new xenoteam sociologist."

From their vid communications, Toni had expected to like Sam Wu, and now she was sure of it. His smile was slow and sincere and his handshake firm. Besides, he was in a similar position on the team, having been brought into the project late after the original sociologist, Landra Saleh,

had developed a serious intolerance to something in the atmosphere of Christmas, despite the battery of tests they all had to go through before being assigned to a new planet.

"Nice to meet you in person, Toni," Sam said.

"Nice to meet you too." Toni looked from one to the other. "And Dr. Repnik? Was he unable to leave the planet?"

There was a short silence. "Uh, he thought Dr. Wu could brief you on anything that has come up since the last communication you received. Continued study of the language has precedence at this point."

Toni nodded. "Of course." But that didn't change the fact that another xenolinguist could brief her better than a sociologist—especially one who had only been on the planet a week himself.

As Ainsworth led her to her quarters aboard ship, she drew Sam aside. "Okay, what's all this about?"

"I was afraid you'd notice," he said, grimacing.

"And?"

"I guess it's only fair you know what you'll be up against. Repnik didn't think a female linguist needed to be added to the team, but Ainsworth insisted on it."

Toni sighed. She had been looking forward to working with Repnik. Of the dozen inhabited worlds discovered in the last century, he had been on the xenteams of half of them and had been the initial xenolinguist on three. He had more experience in making sense of unknown languages than anyone alive. And the languages of Christmas were a fascinating puzzle, a puzzle she had thought she would get a chance to work on with one of the greatest xenolinguists in the galaxy. Instead, she would be a grunt again, an unwanted grunt.

"Here we are," Ainsworth said, as the door to one of the cabins opened at his touch. "We'll have the entrance reprogrammed as soon as you settle in."

"Thank you."

"We'll be going planetside tomorrow. I hope that's enough time for you to recover from your journey."

It never was, but it was all she was going to get. "I'm sure it will be."

"Good, then I will leave you with Dr. Wu so that he can brief you on anything you still need to know."

She set her bag down on the narrow bed and gazed out the viewport at the planet, a striking sight. The discovery team that had done the first fly-by of the Sgr 132 solar system had given it the name Christmas. The vegetation was largely shades of red and the ocean had a greenish cast, while the narrow band of rings alternated shades of green and gold. There was only one major continent, looking from the viewport now like an inverted pine tree, like Christmas wrapping paper with the colors reversed. One more day, and she'd finally be there.

Sam stepped up behind her. "Beautiful, isn't it?"

"And how." She gazed at the planet in silence for a moment and then turned to Sam. "So how did Repnik think he would be able to gather data on the women's language without a female xenolinguist?"

"He wanted to plant more probes and use the technicians and crew of the *Penthesilea*."

She shook her head. "But they're not trained in working with an alien language."

"That's what Ainsworth said." He raised one eyebrow and smiled. "Except he added that they were needed on the ship for the jobs they had been hired to do."

Toni chuckled despite the ache in her gut. "I think I'm going to be very grateful you're on this team, Sam."

Sam grinned. "Ditto."

From: The Allied Interstellar Community General Catalogue. Entry for Sgr 132-3, also known as Christmas, or Kailazh (land) in the native tongue. The third planet in the system of Sgr 132 is 1.2 AU from its sun, has a diameter of 15,840 kilometers, a density of 3.9, and 0.92G. The day is 16.7 standard hours and the year 743 days (1.42 Earth years). It is iron poor but rich in light metals. Satellites: three shepherd moons within a thin ring of debris. Land mass consists largely of one supercontinent covering most of one pole and extending south past the equator. It is now known to be a seeded planet of hominid inhabitants with a number of plants and animals also related to Terran species. Date of original colonization of the planet as yet unknown. Technological status: pre-automation, primitive machines, rudimentary scientific knowledge. There is no written language.

The first thing Toni noticed when she stepped off the shuttle was the scent of the air, tantalizing and slightly spicy, as if someone were baking cookies with cardamom and cinnamon.

The second thing she noticed was the gravity. Christmas had slightly lower gravity than Earth, but Toni had grown up on Mars, and it certainly felt more like home than Admetos had. Her joints still ached from the large planet's crushing gravity. Thank god she had been transferred.

The rings were only the third thing she noticed. They arched across the southern sky like some kind of odd cloud formation, pale but still visible in the daylight.

Sam saw the direction of her gaze. "Wait until you see them at sunset."

Toni nodded, smiling. "I wanted to say I can imagine, but I'm not sure I can."

Irving Moshofski, the xenoteam geologist, stepped forward to introduce himself and shook Toni's hand. "Nice to meet you, Dr. Donato. Gates and Repnik are waiting for us in town."

They followed Moshofski to their ground transportation, an open carriage drawn by descendants of Terran horses, but taller and with lighter bone structure. This pair was a reddish-brown much deeper than the bays of Earth.

Toni took another deep breath of the air. "I swear, if they hadn't already named it Christmas for the colors, they would have changed the name to Christmas when they smelled the place."

"Everyone familiar with Terran Western culture says that," Moshofski said.

She climbed up into the open carriage behind Ainsworth and noted

that it was well sprung, the workmanship of the wood smooth, and the leather seats soft. Their driver was a young Mejan man, tall and willowy, his skin a lovely copper color. As they settled into their seats, Toni greeted him in Alnar ag Ledar, "the language of the sea"—the universal language used by men and women on Christmas to communicate with each other.

Their driver lifted the back of his hand to his forehead in the Mejan gesture of greeting. "Sha bo sham, tajan."

She returned the gesture and turned to Ainsworth, suppressing a chuckle. "Why did he call me 'mother'?"

"That seems to be a term of respect for women here."

"At least that's something. But it looks like I still have a lot to learn."

Ainsworth nodded. "We all do. We strongly suspect the Mejan are withholding information from us. They're very reluctant to begin any kind of treaty negotiations with the Allied Interstellar Community."

"They don't trust us," Moshofski said.

Toni shrugged. "Is there any reason why they should?" She leaned forward to address the driver, speaking rapidly in the men's language. "Mod-en varga esh zhamkaned med sherned?" *Do you trust the men from the sky?*

The driver looked over his shoulder at her and chuckled. "Roga desh varga an zhamnozhd, tajan." *Like I trust the stars.* Toni noticed that the laughing eyes in his copper-brown face were an extraordinary smokey green color.

She raised one eyebrow. "Moshulan sham beli?" *Not to fall on you?*

He laughed out loud and Toni leaned back in her seat, grinning.

The landing base was about ten kilometers outside of the biggest town, Edaru, and she studied the landscape avidly during the trip. She loved the sights and scents and sounds of strange worlds, the rhythms of a new language, the shape and color of plants she had never seen before. For someone from Earth, the red hues of the landscape on Christmas might have conjured associations of barrenness, although the rich shades from magenta to burnt umber were from the native vegetation itself, the wide, strangely shaped leaves of the low-growing plants and the fronds of the trees. But it never would have occurred to Toni to associate reds and umbers with barrenness. For someone from Neubrandenburg on Mars, red was the color of homesickness.

Toni didn't notice Edaru until they were practically upon it. They came over a rise and suddenly the city, crowded around a large bay, was spread out before them. The buildings were low and near to the water; despite occasional flooding, the Mejan were happiest as close to the sea as possible.

At the sight of their vehicle, people came out of their houses, standing in doorways or leaning on windowsills to watch them pass. A number lifted the backs of their hands to their foreheads in the Mejan gesture of greeting.

Christmas was one of the half-dozen seeded planets in the known universe, and as on other such planets, the human population had made some physical adjustments for life in the given environment, most obviously in their height and the prominent flaps of skin between their fin-

gers. But to Toni, who had spent two years now on Admetos among what the human members of AIRA referred to as the giant ants, they didn't appear very alien, or at least only pleasantly so. The people she saw were tall, light-boned, dark-skinned and wide-chested, with long hair in various hues that they wore interlaced with thin braids enhanced by colorful yarn. She was surprised at how little difference there was in the styles worn by the men and the women—not what she would have expected from a world where the women spoke a separate, "secret" language.

Ships and boats of various sizes were docked at the wharves, and one large ship was sailing into port as they arrived. The materials sent to her had described them as primitive craft, but she found them graceful and beautiful. The long, low stone houses had rows of windows facing the sea and were ornamented with patterns of circles and waves in shades of red and purple and green and blue on a background of yellow. Some larger houses were built in a u-shape around a central courtyard. Toni stared and smiled and waved. It looked clean and peaceful, the children content and the women walking alone with their heads held high.

The common house—the main government building of Edaru—was located in the center of town near the wharves. Councilor Lanrhel himself was waiting for them, the back of his hand touching his forehead in greeting. She couldn't help thinking it looked as if he was shading his eyes to see them better.

Lanrhel was a handsome man, even taller than the average Mejan, with streaks of gray in his reddish-brown hair, looking almost like an extra shade in the colors of his braids. The pale, tooled leather of his short cape, which was worn in the long warm half of the year, was the same length as his tunic, reaching just past the tops of his thighs. He stood in the doorway, his open palm in front of his forehead, and Toni returned the gesture as she approached the building. When Lanrhel didn't relax, she glanced at Sam and Ainsworth, unsure what to do. Perhaps she had not made the gesture correctly. She repeated it and said in the best local dialect she could manage, "Negi eden an elamed elu mazhu velazh Edaru. An rushen eden sham." Which meant as much as I'm-honored-to-be-a-guest-in-Edaru-thank-you. Except that the language of the Mejan had no verb for "to be" and tenses were expressed in auxiliary verbs that could go either before or after the main verb, depending on the emphasis.

The councilor smiled widely and lowered his arm, and Toni winced, realizing she had used the male first person pronoun. Her first official sentence on Christmas and it was wrong. She was glad Repnik wasn't there. Sam and Ainsworth didn't seem to notice that she'd made a mistake, but when she glanced back at the driver with the smokey green eyes, she saw that he too had a grin on his wide lips.

"We are happy to have you visit our city," Lanrhel said and led them into the common house. They crossed a central hallway and entered a large room where about a dozen people were seated in comfortable chairs and sofas in a circle. Low tables were scattered in the center, and on them stood strange-looking fruits in glossy bowls made of the shells of large, native beetles. Decorative lace hangings graced the walls.

Lanrhel announced them and the others rose. Toni was surprised to see

almost as many women as men, all garbed in soft, finely tooled leather of different colors. Leather was the material of choice of the Mejan, and their tanning methods were highly advanced. Sam had speculated it was because they lived so much with water, and leather was more water-resistant than woven materials.

She recognized Repnik immediately. She knew his face from photos and vids and holos; thin and wiry, with deep wrinkles next to his mouth and lining his forehead. Despite age treatments, the famous linguist looked old, used-up even, more so than the images had led her to believe. He was also shorter than she expected, barely topping her eyebrows.

He came forward slowly to shake her hand. "Ms. Donato?" he said, omitting her title.

Two could play that game. "Mr. Repnik. I'm honored to be able to work with you."

His eyes narrowed briefly. "It really is unfortunate that you were called to Christmas unnecessarily. I'm sure you will soon see that there is little contribution for you to make here. Despite the sex barrier, I've managed to collect enough material on my own to make some conclusions about the women's dialect."

Sam had warned her on ship, but Repnik's unwelcoming attitude still stung. She did her best not to let it show, keeping her voice level. "A dialect? But it was my understanding *Alnar ag Eshmaled* couldn't be understood by the men."

"Ms. Donato, surely you are aware that speakers of different dialects often cannot understand each other."

She bit her lip. If she was going to have a hand in deciphering the women's language, she had to get along with him. Instead of arguing, she shrugged and gave Repnik a forced smile. "Well, as they say, a language is a dialect with an army and a navy. And that's not what we have here, is it?"

Repnik nodded. "Precisely."

Jackson Gates, the team exobiologist, moved between them and introduced himself, earning Toni's gratitude. He was a soft-spoken, dark-skinned man with graying hair and beard, obviously the type who cared little about cosmetic age treatments. She judged his age at barely over fifty.

Lanrhel then introduced her to the other members of the Edaru council. The oldest woman, Anash, came forward and presented Toni with a strip of decorative lace, similar to the beautiful hangings on the walls. Toni lifted the back of her hand to her forehead again and thanked her.

The multitude of introductions completed, they sat down on the leather-covered chairs and couches, and Ainsworth asked in barely passable Mejan if anything had been decided regarding treaty negotiations with AIC. Lanrhel looked at Toni, and she repeated the request, adding the correct inclinations and stripping it of the captain's Anglicized word order. Why hadn't the councilor referred to Repnik? She'd been studying like a fiend for the last month, but surely his command of the language was better than hers.

Lanrhel leaned across the arm of his chair and murmured something

to Anash. Toni caught mention of the treaty again, and the words for language, house, and her own name. Anash looked across the circle at her and smiled. She returned the smile, despite the headache she could feel coming on. The first day on a new planet was always difficult, and this time she'd had conflict brewing with her boss even before she got off the shuttle. But next to Anash, another woman had pulled out her crocheting (a far cry from the stiff formality of the official functions she'd had to endure on Admetos), a man with eyes the color of the sea on Christmas had joked with her, and she still had a sunset to look forward to.

And no one was going to toss her into the ocean just yet. She hoped.

From: Preliminary Report on Alnar ag Ledar, primary language of Christmas. Compiled 29.09.157 (local AIC date) by Prof. Dr. Dr. Hartmut Repnik, h.c. Thaumos, Hino, Marat, and Polong, Allied Interstellar Research Association first contact team xenolinguist, Commander, Allied Interstellar Community Forces.

The language of the Mejan people of Christmas is purely oral with both inflecting and agglutinating characteristics. Tense information seems to be given exclusively in an inflected auxiliary that takes the place of helping verbs and modals while also providing information on the addressee of the sentence. Nouns are gendered, masculine and feminine, but with some interesting anomalies compared to known languages. Adjectives are non-existent. The descriptive function is fulfilled by verbs (e.g. jeraz, "the state of being green").

The arc of the rings lit up like lacework in the last rays of the setting sun, while the sky behind it showed through purple and orange and pink. Toni took a deep breath and blinked away the tears that had started in her eyes at the shock of beauty. Beside her, Sam was silent, too wise to disturb her enjoyment of the moment.

They were sitting on the veranda of the house AIRA had rented for her and any other women from the ship who had occasion to come planetside. Together they watched as the colors faded and the sky grew dark. The small moons accompanying the rings appeared, while the brilliant lace became a dark band, starting in the east and spreading up and over.

"Maybe that's why they seem to set such a high store by lace," Toni finally said when the spectacle was over.

Sam nodded. "I've thought of that too."

She took a sip of the tea, sweet and hot with a flavor that reminded her subtly of ginger, and leaned back in her chair, pulling her sweater tighter around her. The night grew cold quickly, even though it was early fall and Edaru was in the temperate zone.

"What have you learned about the role of women since you've been here?" Toni asked.

"Well, since they will only talk to the men of Edaru, it's a bit difficult finding out anything. But they don't live in harems, that's for sure."

"Harems" was Repnik's term for the houses of women, although they could come and go as they pleased and the houses were off-limits for men completely, as far as the first contact team could determine.

She laughed, briefly and without humor. "I wonder what bit him."

Sam was quiet so long, she turned to look at him. In the flickering light of the oil lamp, his face was shadowed, his expression thoughtful. They had a generator and solar batteries for electricity in Contact House One and Two, but they tried to keep use of their own technology to a minimum.

"I don't think he ever had a life," Sam finally said. "Most people are retired by the time they reach a hundred. But look at Repnik—what would he retire to? His reputation spans the known universe, but it's all he's got. There's no prestige in hanging out on a vacation planet, and I doubt if he knows how to have fun."

His generous interpretation of Repnik's behavior made her feel vaguely guilty. "True. But I still get the feeling he's got something against women."

"Could be. I heard he went through a messy divorce a few years back—his ex-wife was spreading nasty rumors about him. I'm glad I'm not the woman working under him."

"Bad choice of words, Sam."

He smiled. "Guilty as charged."

Mejan "music" from a house down the hill drifted up to them, an odd swooshing sound without melody that reminded Toni of nothing so much as the water lapping the shore. Some native insects punctuated the rhythm with a "zish-zish, zish-zish" percussion, but there were no evening bird sounds. According to Jackson Gates, the only native life forms of the planet were aquatic, amphibian, reptilian, or arthropod. There were no flying creatures on Christmas at all—and thus no word for "fly" in the Mejan language. Since the arrival of the xenoteam, the term "elugay velazh naished" ("move in the air") had come into use.

It was impossible for contact to leave a culture the way it was before. Leaving native culture untouched was an article of belief with AIRA, but it was also a myth.

Toni finished her tea and put down her mug. "It's occurred to me that Repnik's being led astray by the fact that Christmas is a seeded planet. Most of the other languages he worked on were of non-human species."

"Led astray how?"

"Well, when they look so much like us, you expect them to *be* like us too. Language, social structures, the whole bit."

"It's a possibility. Just don't tell him that."

"I'll try. But I have a problem with authority, especially when it's wrong."

Sam chuckled. "I don't think Repnik is serious about the harems, though. It's just his idea of a joke."

"Yeah, but there are also some odd things about the language that don't seem to go along with his analysis. Grammatical gender for example. Repnik refers to them as masculine and feminine, but they don't match up with biological sex at all. If he's right, then 'pirate' and even 'warrior' are both feminine nouns."

"I don't have any problem with that."

Toni pursed her lips, pretending to be offended. "But *I* do."

"I probably get them wrong all the time anyway."

"Don't you use your AI?" Like herself, Sam had a wrist unit. AI implants had been restricted decades ago because they led to such a high percentage of personality disorders.

He shrugged. "I don't always remember to consult it. Usually only when I don't know a word."

"And there's no guarantee the word will be in the dictionary yet or even that the AI will give you the right word for the context if it is."

"Exactly."

Toni gazed out at the night sky. Stars flickered above the horizon, but where the rings had been, the sky was black except for the shepherd moons. Below, the bay of Edaru was calm, the houses nestled close to the water, windows now lit by candlelight or oil lamps. She wondered where the green-eyed driver was, wondered what the Mejan executed people for, wondered if she would get a chance to work on the women's language.

She repressed the temptation to sigh and got up. "Come on, I'll walk you back to the contact house. I need to talk to Ainsworth before he returns to the ship."

The legend of the little lace-maker

Recorded 30.09.157 (local AIC date) by Landra Saleh, sociologist, first contact team, SGR 132-3 (Christmas / Kailazh).

As long as she could remember, Zhaykair had only one dream—to become the greatest maker of lace the Mejan had ever known. All young girls are taught the basics of crocheting, but Zhaykair would not stop at that. She begged the women of her village to show her their techniques with knots, the patterns they created, and she quickly found the most talented lace-maker among them. Saymel did not belong to Zhaykair's house, but the families reached an agreement, and the little girl was allowed to learn from Saymel, although the job of Zhaykair's house was raising cattle.

But before she had seen nine summers (*note: approximately thirteen standard years—L.S.*), Zhaykair had learned all Saymel had to teach her. She begged her clan to allow her to go to the city of Edaru, where the greatest lace-makers of the Mejan lived. Her mothers and fathers did not want to send her away, but Saymel, who could best judge the talent of the young girl, persuaded them to inquire if the house of Mihkal would be willing to train her.

The elders sent a messenger to the Mihkal with samples of Zhaykair's work. They had feared being ridiculed for their presumption, but the messenger returned with an elder of the house of Mihkal to personally escort Zhaykair to the great city of Edaru.

Zhaykair soon learned all the Mihkal clan could teach her. Her lace was in such great demand, and there were so many who wanted to learn from her, that she could soon found her own house. Her works now grace the walls of all the greatest families of the Mejan.

"If Repnik refuses to allow you to work on the women's language, I'm not sure what I can do to help," Ainsworth said.

"Then why did you send for me?" She hardly felt the cool night air against her skin as their open carriage headed for the AIC landing base. If she hadn't returned to the contact house with Sam, she would have missed Ainsworth completely. A deliberate move, she suspected now.

"I thought I could bring him around."

"Can't you order him?"

"I don't think that would be wise. With a little diplomacy, you can still persuade him. In the long run he will have to see that he needs you to collect more data."

Toni rubbed her temples. The headache she'd first felt coming on during the introductions in the common house had returned with a vengeance. "He'll probably try to use remote probes."

"He already has. But since none of us are allowed in the women's houses, they can't be placed properly. We've tried three close to entrances and have lost them all."

"What happened to them?"

"One was painted over, one was stepped on and one was swept from a windowsill and ended in the trash."

They pulled up next to the temporary landing base, and the light from the stars and the moons was replaced by aggressive artificial light. Ainsworth patted her knee in a grandfatherly way. "Chin up, Donato. Do your work and do it well, and Repnik will recognize that you can be of use to him. We'll get the women's language deciphered and you will be a part of it. That's what you want, isn't it?"

"Yes." Maybe everyone was right and she was just overreacting to Repnik's reluctance to let her work on the women's language. It was certainly nothing new for AIRA researchers to feel threatened by others working in the same field and be jealously defensive of their own area of expertise. Toni had seen it before, but that didn't mean she had to like it. Her first day on Christmas was not ending well. At least she'd had the sunset.

The captain got out of the carriage and waved at her as the driver turned it around and headed back into town.

When they were nearing the city again, Toni leaned forward, propping her arms on the leather-covered seat in front of her. The driver was the same one they'd had this morning. Strange that she'd been so fixated on Ainsworth and her own problems that she hadn't even noticed.

He glanced over his shoulder at her and smiled but said nothing.

Toni took the initiative. "Sha bo sham."

"Sha bo sham, tajan." The planes of his face were a mosaic of shadow and moonlight, beautiful and unfamiliar.

"Ona esh eden bonshani Toni rezh tajan, al?" *Me you call Toni not mother, yes?*

He laughed and shook his head in the gesture of affirmative, like a nod in Toni's native culture. "Bonlami desh an. Tay esh am eladesh bonshani Kislan." *Honored am I. And you me will call Kislan.*

She smiled and offered her hand as she would have in her own culture. He transferred the reins to one hand, then took her own hand gently and pressed it to his forehead. His skin was warm and dry. She couldn't see

his smokey green eyes in the starlight, but she could imagine them. When he released her hand, she could have sworn it was with reluctance.

Perhaps the day was not ending so badly after all.

The women of Anash's family, the house of Ishel, were gentle but determined—they would not allow Toni to learn Alnar ag Eshmaled, "the language of the house," from them until she promised not to teach it to any men. Which of course was impossible. The point of research funded by AIRA was for it to be published and made accessible to everyone in the known galaxy. You couldn't restrict access to data on the basis of sex. On the basis of security clearance perhaps, but not on the basis of sex.

"Bodesh fadani eshukan alnar ag eshmaled," Anash said, her expression sympathetic. *No man may speak the language of the house.* Permission-particle-tense-marker-present-female addressee verb negative-marker-subject object: with the mind of a linguist, Toni broke down the parts of the sentence, trying to see if the women favored different sentence structures than the men.

So they weren't going to speak their language with her. She had spent her first two days setting up house and getting her bearings, and now that she finally had an appointment with some of the women of the planet, she learned that Repnik was right—she wouldn't be able to do the job she had come here to do. But at least they had welcomed her into the women's house and were less careful with her than with the men of the contact team. With the camera in her AI, she had recorded Anash and Thuyene speaking in their own language several times. She felt a little bad about the duplicity—she'd never had to learn a language by stealth before—but if she was going to fulfill her responsibilities, she didn't have a choice. And when it came right down to it, AIRA never asked anyone's permission to send out the probes used in the first stages of deciphering a new language. Stealth always played a role.

But what a dilemma. AIRA was required to make their knowledge of new worlds public. Not to mention Toni would only be able to make her reputation as a xenolinguist if she could publish the results of her research. Perhaps they could work something out with AIRA that would make it possible for her to study the women's language.

"May I still visit this house?" Toni asked in the men's language.

Anash smiled. "We are happy to welcome the woman from the sky. And perhaps you can teach us the language you speak as the men of the sky teach the men of the people."

"Why is it that you will speak with the men of Edaru and not with the men of the first contact team?"

The smile vanished from Anash's face. "They are offensive." In the Mejan language it was more like "exhibit a state of offensiveness," a verb used for descriptive purposes, but it was nonetheless different from the verb "to offend," which connoted an individual action.

"What have they done?" Toni asked.

The older woman's face seemed to close up. "They speak before they are spoken to."

Was that all it was? The men of the contact team had offended the Me-

jan sense of propriety? "So men of a strange house may not speak to a woman without permission?"

"They may not. That intimacy is only granted within families."

How simple it was after all: someone had merely made the mistake of not asking the right questions. She had read stories of contact teams that had suffered misunderstandings from just such a mistake. But how were you supposed to know which questions to ask when dealing with an alien culture? It was no wonder the mistake had been made over and over again.

And their team had the excuse of having lost their sociologist after less than a week.

Toni rose and lifted the back of her hand to her forehead. "I will come again tomorrow at the same time if that is convenient."

"I will send word."

Toni started to nod and then caught herself and shook her head.

Visiting a new world was exhausting business.

DG: sci.lang.xeno.talk

Subject: We aren't redundant yet (was Why I do what I do)

From: A.Donato@aira.org

Local AIC date: 21.10.157

<insultingly uninformed garbage snipped>

Okay, I'll explain it again, even though I've been through this so many times on the DGs it makes my head spin.

No, we can't just analyze a couple of vids made by a drone and come up with a language. Even with all the sophisticated equipment for recording and analysis that we now possess, at some stage in deciphering an alien tongue we're still dependent on the old point and repeat method. The human element of interaction, of trial and error, remains a necessary part of xenolinguistics. IMNSHO, the main reason for this is that analyzing an alien language, figuring out the parts of speech and the rules at work (which is the really tough part, and *not* simple vocabulary), is more than just "deciphering"—a very unfortunate word choice, when it comes right down to it. "Deciphering" implies that language is like a code, that there is a one-to-one correspondence between words, a myth that supports the illusion that all you have to do is substitute one word for another to come up with meaning. Language imperialists are the worst sinners in this respect, folks with a native tongue with pretensions toward being a diplomatic language, like English, French or Xtoylegh.

People who have never learned a foreign language, who have always relied on the translation modules in their AIs to do a less-than-perfect job for them, often can't conceive how difficult this "deciphering" can be, with no dictionaries and no grammar books. An element you think at first is an indefinite article could very well be a case or time marking. You have no idea where the declensions go, no idea if the subject of the verb comes first or last or perhaps in the middle of the verb itself.

No linguistics AI ever built has been idiosyncratic enough to deal satisfactorily with the illogical aspects of language. Data analysis can tell you how often an element repeats itself and in which context, it can make ed-

educated guesses about what a particular linguistic element *might* mean, but the breakthroughs come from intuition and hunches.

AIs have been able to pass the Turing test for two centuries now, but they still can't pass the test of an unknown language.

As she left the women's house, Kislan was coming down the street in the direction of the docks.

"Sha bo sham, Kislan."

"Sha bo sham, Toni." He pronounced her name with a big grin and a curious emphasis on the second syllable. After three days planetside, she was beginning to see him with different eyes. She recognized now that the colors braided into his hair signified that by birth he was a member of the same family as Councilor Lanrhel himself and he had "married" into the house of Ishel, one of the most important merchant clans in the city of Edaru. It seemed the council of Edaru had sent a very distinguished young man as transportation for their guests.

And he was part of some kind of big communal marriage.

"Where are you off to?" she asked.

"The offices of Ishel near the wharves. A ship has returned after an attack by pirates and we must assess the damage."

"Are pirates a problem around here?"

Kislan shook his head in the affirmative. "It is especially bad in the east."

They stood in the street awkwardly for a moment, and then Kislan asked, "Where do you go now? May I walk with you?"

"Don't you have to get to work?"

He shrugged. That at least was the same gesture she was used to. "There is always time for conversation and company."

Toni grinned. "I'm on my way back to the contact house."

Kislan turned around and fell into step next to her. She asked him about his work and he asked her about hers, and it occurred to her how odd it was that this particular social interaction was so much like what she had grown up with and seen on four planets now.

Talking and laughing, they arrived at the contact house in much less subjective time than it had taken Toni to get to the house of Anash—and it was uphill. She watched Kislan stride back down to the wharves, starting to worry about her own peace of mind.

But when she entered the main office of the contact house, she had other things to worry about.

"I hope you will remember to remain professional, Donato," Repnik said.

Toni resisted the urge to retort sharply and sat down on the edge of a table. There were no AIRA regulations forbidding personnel from taking a walk with one of the natives—or even sleeping with one, as long as the laws of the planet were not broken. "Kislan was telling me about how they lost a ship to pirates. What do we know about these pirates?"

"Not much," Sam said. "Ainsworth wants to do some additional surveillance of the eastern coast."

"How did your meeting with Anash go?" Repnik asked.

She took a deep breath. "They won't speak their language with me until I promise no men will ever learn it."

Repnik shrugged. "I told you your presence here was unnecessary."

Didn't he even have any intellectual curiosity left, any desire to figure out the puzzle? Whether he resented her presence or not, if he still had a scientific bone left in his body he would be taking advantage of having her here.

She stood and began to pace. "Wouldn't it be possible to work out a deal with AIRA? Something that would allow us to reach an agreement with the women on their language? If Alnar ag Eshmaled had a special status, then only certain researchers would have access to the information."

"You mean, *women* researchers."

Toni stopped pacing. "Well, yes."

"Which would mean I, the head of this contact team, would be barred from working on the women's language."

She barely registered the minor victory of Repnik now referring to Alnar ag Eshmaled as a language. She had painted herself into a very hazardous corner. "I was only thinking of how we could keep from offending the women."

"And how you could get all the credit for our findings."

"I didn't—"

Repnik stepped in front of her, his arms crossed in front of his chest. "I would suggest that you try to remember that you're an assistant here."

Toni didn't answer for a moment. Unfortunately, that *wasn't* the way she remembered the description of her assignment to Christmas. But it had named her "second" team xenolinguist. Which meant if Repnik saw her as an assistant, she was an assistant. "Yes, sir. Anything else?"

"Tomorrow morning I would like you to work on compiling a more extensive dictionary with the material we have collected in the last several weeks."

"Certainly, sir."

She picked her bag up off the floor and left Contact House One for the peace and safety of Contact House Two before she could say anything else she would regret. How could she have been so stupid? In terms of her career, it would have been smarter to suggest using her visits to install surveillance devices, even if that would have been questionable within the framework of AIRA regulations. But of course Repnik would never agree to a strategy that would leave her to work on one of the languages of Kailazh exclusively.

When would she learn?

Toni pushed open the door of her house, slipped off her jacket and hung it over the back of a chair. Well, she was not about to break the laws of her host planet, Repnik or no Repnik, so before she hooked her mobile AI into her desk console, she set up a firewall to keep the men on the team from learning the women's language by accessing her notes.

Once her privacy was established, she told the unit to replay the women's conversation, and the sounds of their voices echoed through the small house while she got herself something to eat.

"Index mark one," she said after the first short conversation was over,

and her system skipped ahead to the next conversation. The first thing she noticed was that the women's language had some rounded vowel sounds that were absent in the men's, something like the German Umlaut or the Scandinavian "ø." There were a couple of words that sounded familiar, however.

She finished the bread and cheese and tea and wiped her mouth on a napkin. "System, print a transcript of the replayed conversations using the spelling system developed by Repnik, and run a comparison with the material already collected on the men's language."

"Any desired emphasis?"

"Possible cognates, parallel grammatical structures, inflections."

While the computer worked, she laid out the printed sheet of paper in front of her on the desk. Sometimes she found it easier to work in hard copy than with a projection or on a screen. Doodling with a pencil or pen on paper between the lines could help her to see new connections, possibilities too far-fetched for the computer to take into consideration—but exactly what was needed for dealing with an arbitrary, illogical human system like language.

The transcript was little more than a jumble of letters. Before the initial analysis, the computer only added spaces at very obvious pauses between phonemes. Pencil in hand, Toni gazed at the first two lines, the hodgepodge of consonants and vowels.

Tün shudithunföslodi larasethal segumshuyethunrhünem kasemalandaryk.

Athneshalathun rhün semehfarkari zhamdentakh.

The last recognized unit of meaning looked like a plural. Plural was formed in the men's language by adding the prefix "zham-" to the noun, and there was no telling if those particular sounds were the same in the women's language, or even if the plural was built the same, but it at least gave her a place to start.

There was a faint warning beep and the computer announced in its business-like male voice, "Initial analysis complete."

Toni looked up. "Give me the possible cognates. Output, screen." A series of pairs of words replaced an image of the landscape of Neubrandenburg.

Dentakh—tendag.

But why would the women be discussing pirates in the middle of a conversation about languages?

When she had gotten home, Toni had felt another stress headache coming on, but now it had disappeared completely and without drugs. She had a puzzle to solve.

"Print out the results of the analysis," she said, pulling her chair closer to the table holding the console.

She went to work with a smile.

From: Preliminary Report on Alnar ag Eshmaled, secondary language of Kailazh (Christmas). Compiled 28.11.157 (local AIC date) by Dr. Antonia Donato, second xenolinguist, Allied Interstellar Research Association first contact team. (Draft)

The men's and women's languages of Kailazh (Christmas) are obviously related. While this does not completely rule out an artificially constructed secret language, as has been observed in various cultures among classes wanting to maintain independence from a ruling class, the consistency in the phonetic differences between the cognates thus discovered seems to indicate a natural linguistic development. A further argument against a constructed language could be seen in sounds used in the women's language that are nonexistent in the men's language.

Interestingly enough, the women's language appears to have the more formal grammar of the two, with at least two additional cases for articles (dative and genitive?), as well as a third form for the second person singular, all of which are unknown in Alnar ag Ledar. To confirm this, however, much more material will need to be collected.

She'd had approximately three hours of sleep when her mobile unit buzzed the next morning. She burrowed out from under the pile of blankets and switched on audio. She didn't want anyone seeing her just yet.

"Yes?" she said and snuggled back into her warm nest of covers.

Repnik's voice drifted over to her and she grimaced. "Donato, do you realize what time it is?"

"No. I still don't have the display set up," she replied, trying to keep the sleep out of her voice. "And I must have forgotten to set my unit to wake me last night. Sorry."

An impatient "hmpf" came from her system. "Jump lag or no jump lag, I'd like you over here now."

The connection ended abruptly and Toni pushed the covers back and got up, rubbing her eyes. Nights were simply too short on Christmas, especially when you didn't go to bed until the sun started to come up.

Leather togs on and coffee down, she was soon back at Contact House One, keying in and correcting terms in the preliminary version of the dictionary. After giving her his instructions, Repnik had left with Sam for a tour of the tannery outside of town, where they would ask questions and collect data and make discoveries. As usual, Gates and Moshofski were already out looking at boulders and bushes and beasts.

While she was left with drudgery.

It was funny how something she had done regularly for the last five years now seemed much more tedious than it ever had before. Toni loved words enough that even constructing the necessary databases had always held a certain fascination. Besides, it was a means to an end, a preliminary step on the ladder to becoming a first contact xenolinguist working on her own language.

Now it was a step down.

She spent the morning checking and correcting new dictionary entries automatic analysis had made, consulting the central AI on her decisions, and creating links to grammatical variations and audio and visual files, where available. And all that on only three hours of sleep.

"Fashar," the computer announced. "Lace, the lace. Feminine. Irregular noun. Indefinite form fasharu."

Toni did a search for "rodela," another word for lace in the Mejan lan-

guage, and then added links between the words. Under the entry "fashar," she keyed in, "See also 'rodela' (lace) and 'rodeli' (to create lace or crochet)." She would have to ask Anash if there was a difference between "rodela" and "fashar"—as yet, nothing was noted in their materials.

Outside the door of the lab, she heard the sound of voices, Sam and Repnik returning from field work. Having fun.

"Fashela," the computer announced. "Celebrate. Verb, regular."

"That's the attitude," Toni muttered.

The door opened, and Repnik entered, followed by Sam, who looked a little sheepish. Getting chummy with the top of the totem pole.

Repnik sauntered over to her desk. "How is our dictionary coming along?" he asked in that perky voice bosses had when they were happy in the knowledge that they were surrounded by slaves.

"I'm up to the 'f's now in checking entries and adding cross references. Our material is a little thin on specific definitions, though."

The faint smile on his face thinned out and disappeared. He looked offended, but Toni had only been pointing out a minor weakness, common in early linguistic analysis of new languages. Man, was he touchy. She would have to tread carefully. "I've been tagging synonyms where we don't have any information on the kinds of situations where one word or the other would be more appropriate. Would you like to ask the Mejan about them or should I?"

"Make a note of it," Repnik said shortly.

"Certainly, sir."

"I have another meeting with Councilor Lanrhel. I'll see you both again tomorrow."

"But—"

"Tomorrow, Donato."

When he was gone, Toni joined Sam next to the small holo well they had set up in the lab, where he was viewing a scene of what looked like a festival.

"I learned something the other day in the women's house that you might find interesting."

"Bookmark and quit," Sam said to the holo projector before facing her. "That's right, I wanted to ask you about that, but you left pretty abruptly yesterday."

Toni pulled over a chair and straddled it, leaning her forearms on the back. "I know. I should have stuck around. Maybe I'm overreacting, but I'm starting to get the feeling Repnik wants to make me quit."

Sam shook his head. "You *are* overreacting. Your suggestion yesterday, logical as it was, was practically calculated to make him feel threatened. Just give him some time to get used to you."

"I'll try."

"So, what did you find out?"

Toni chuckled. "Right. Anash told me yesterday that there's no specific taboo on women speaking with strange men. The reason they won't speak with the men of our team is because they offend them by speaking before they are spoken to."

Sam's eyes lit up. "Really?"

She nodded. "Do you know if you're guilty of offensive behavior yet?"

"I don't think so. When I got here, Repnik told me there was a taboo against strangers speaking with Mejan women *at all*, so I didn't even try. Wow. This changes everything."

"Yup. I wanted to get together with Anash and Thuyene again this afternoon. I could ask then if we could meet outside of the women's house sometime and you could join us."

"Maybe you should find out first how I *am* supposed to conduct myself."

"The young one with the hair of night and eyes like a *likish*?" Anash asked. A *likish* was one of the native amphibian creatures of Kailazh, with both legs and fins and a nostril/gill arrangement on its back that reminded Toni vaguely of whales. She had yet to see a *likish*, but she had seen pictures, and she could appreciate the simile. Not having adjectives, Alnar ag Ledar could be quite colorful if the speaker chose some other way to describe something than using the attribute verbs.

"Al," Toni said. Yes.

Anash gazed at her with a speculative expression—or at least what looked like one to Toni. Her eyes were slightly narrowed, her head tilted to one side, and her lips one step away from being pursed. "That one has not himself offended any of the women of Edaru," the older woman finally said. "You say he is a specialist in understanding the ways of a people?"

"Yes. He has replaced Landra Saleh, who I believe you met before she became ill."

"Then we will meet with him two days from now in the common house."

That would mean she'd have to give up her surreptitious recordings in the women's house for the day, but helping Sam would be worth it. She felt as if she had given him a present, he was so happy when she told him.

The day of their appointment, they walked together down the hill to the center of town, Toni sporting a new leather cape she had purchased for a couple of ingots of iron from the string she wore around her neck. Iron was much more precious on Kailazh than gold. She examined the stands they passed. Most of the vendors they saw were men, but occasionally a lone woman sat next to the bins of fruits and vegetables or the shelves of polished plates and bowls made from the shells of oversized bugs. Such a female vendor would have to deal with male customers alone, some of whom would necessarily be strangers. Perhaps now that they had started asking the right questions, they could learn something more of the rules governing intersexual relations.

"From what you've learned since you arrived, do you know when one of those ceremonial gifts of lace is appropriate?" she asked, trying to act naturally, but still feeling like a circus animal. People peered out of their windows at them as they passed, and children ran up to them, giggling and staring, or hid behind their mothers' or fathers' legs. It hadn't been any different on Admetos, but the beings there had looked like ants. These were people.

"No. But it seems to be something only given by women. We aren't on sure enough ground yet to start messing with symbolic gestures."

Toni gave a playful snort of disgust. "You've already been here two weeks. What have you been doing in all that time?"

Sam chuckled. "I may not trust myself with symbols, but we could certainly bring Anash a bottle of that lovely dessert wine that Edaru is famous for. Have you tried it yet?"

"I'm still trying to stick mostly to foods I'm familiar with. I don't want to end up offworld like your predecessor."

"Well, once you get daring, take my word for it, it's an experience you don't want to miss. And according to Jackson, the fruit *kithiu* that they use to make *denzhar* is descended from plain old Terran grapes."

"Okay, you've convinced me. Where's the nearest wine dealer?"

The merchant was a man, so Toni didn't have a chance to see what the interaction would be between Sam and a female merchant. They paid with a small bead each from the strings of precious metals they wore around their necks, and arrived at the common house just as Kislan was helping Anash and Thuyene out of an open carriage. To her surprise, Toni felt a pang resembling jealousy. These two women both belonged to Kislan's family, and while Anash was probably old enough to be his mother, Thuyene wasn't much more than Toni's age; probably less biologically on this world without age treatments. Her glossy reddish-brown hair hung in a single thick braid to her waist, laced with the colors of her birth clan and her chosen clan. Her amber eyes were full of life and intelligence. And Kislan was in some kind of group marriage arrangement with her. Did he hold her hand a little longer than Anash's? Or was Toni's feverish, human male-deprived imagination just taking her for a ride?

Anash waved. Toni gave herself an inner shake and returned the gesture.

"I'm glad you didn't have to wait," Anash said. "I was afraid business went long." She looked at Sam curiously, but he said nothing, just lifting the back of his hand to his forehead in the gesture of greeting. Kislan said something rapidly to the women of his family in a low voice that Toni couldn't understand. She looked away, hoping her face wasn't as flushed as she felt.

The room Anash led them to in the common house was smaller than the one where they had met on Toni's arrival, a comfortable, sunny room with large windows facing a central courtyard and lace hangings decorating the walls.

"Samuel Wu has brought you a gift in hopes that relations between you may begin in a spirit of harmony and trust," Toni said as they took seats on upholstered brocade sofas. This was the first time she had seen furniture covered in anything besides leather, and she wondered if this room was usually reserved for special occasions.

Kislan sat down beside her, and Toni felt her pulse pick up and her cheeks grow hot.

Anash addressed Sam directly. "Sha bo sham, Samuel. We thank you, both for the thought and the respect that goes with it. We will be happy to tell you of Mejan ways and are curious to hear about the ways of the stars."

Sam got the bottle of *denzhar* out of his bag while Toni checked the AI

at her wrist to make sure she had set it for record mode. Across from her, Thuyene pulled a crocheting project out of her own bag, and Toni suppressed a smile.

"Sha bo sham, tajan," Sam said, leaning across and presenting the wine to Anash. "I am honored to be able to speak with you and hope that the gift is welcome."

They had chosen well. A pleased smile touched Anash's lips as she accepted the bottle, and Toni almost sighed in relief.

Sam began by asking about the specific rules governing interaction between men and women and learned that other than the disrespect shown if a man not of a woman's family spoke before being spoken to, there was a whole battery of taboos concerning what was appropriate when and with whom and at what age. It reminded Toni vaguely of what she had read of Victorian England—except for the group marriages, of course. They never got to the topic of sex proper, however; Sam was obviously doing his best to tread carefully, and open discussion of sexual practices was taboo in the majority of cultures in the galaxy.

"Boys move into the house of men when they are weaned, correct?" Sam asked.

Anash shook her head. Toni felt the heat from Kisan's body next to her. "Is there any kind of ritual associated with the move?"

"To leave the mother is to leave the sea, so there is a celebration on the beach called *mairheltan*."

Kisan spoke up. "It is the first memory I have, the *mairheltan*."

"And the ritual?" Sam asked.

"The boy who is to leave the house of women goes into the water with the mother and comes back out by himself," Thuyene said. "Then there is a feast with fish and *dashik*, and the child receives a leather cape and a length of lace."

She used the term "*roda ag fashar*" not "*rodel*" when she spoke of lace. Toni remembered the dictionary entries she'd been working on and couldn't help asking an off-topic question. "What exactly is the difference between 'fashar' and 'rodel'?"

Thuyene lifted up the crocheting she was working on. "This is 'rodela.'" She pointed to a wall hanging just past Kisan's shoulder. "This is 'fashar.'"

It was all lace to Toni, but she was beginning to see the difference. "So 'fashar' is the piece when it is finished?"

"Not always. The 'fashar' given to a boy when he joins the house of men only begins. The women of his house can add to the 'fashar' he is given as a boy."

Toni would have liked to ask more, but Sam was already asking another question himself. "If a boy has already begun to talk before he leaves the house of women, how is it he doesn't learn to speak the women's language?"

Anash chuckled. "His mother corrects him if he speaks the language that is wrong."

Sam laughed and looked at Kisan, who smiled and shrugged. Toni could see how that would be a very effective method.

The meeting continued until the light through the windows began to

grow dim, and ended with a promise to show Sam around town the next day to see some of the places where women worked in Edaru. Anash couldn't accompany him herself, but she would see to it that one of the women of her house met him tomorrow morning at the Mejan equivalent of a café in the main square. Of course, he still was not allowed to visit any of the houses of women, but his enthusiasm at the sudden progress in his research was obvious in his voice and posture.

Toni had learned quite a bit herself that afternoon. It was surprising what you could discover if you only knew which questions to ask. Anash and Thuyene had been astonished at some of the things they told them about their native cultures as well, in particular the institution of marriage, which they only seemed to be able to understand in terms of property, of one partner "belonging" to the other.

She had done her best to suppress her awareness of Kislan beside her, but the discussion of different forms of partnership had unfortunately had quite the opposite effect. As a human male of Kailazh, he was both familiar and exotic at the same time. All the senses in her body were screaming "potential partner" for some illogical and primordial reason, and she had the uncomfortable sensation that Kislan was aware of her in a similar way. He hadn't spoken much, and neither had she. Instead, they had sat there, the lovely view of the red fern and coral-like vegetation visible through the window across from them.

On one level, Toni was relieved when Anash called an end to the meeting. On another, she wished she could continue to sit there and talk for hours, learn more about social arrangements on Christmas, find out how the Mejan viewed their own history. And on the primal level, she was humming. Feeling that kind of physical attraction again after so long, almost knee to knee and elbow to elbow, was mind- and body-racking.

She barely looked at Kislan as they took their leave, mentally kicking herself for the way she was responding to his physical presence.

"Their reaction to marriage forms in Terran culture was interesting, don't you think?" Sam said when they were out of earshot of the common house.

"You mean in terms of property?" Toni asked.

"Exactly. I wish we could find out more about their history. It makes me wonder if slavery might not be too far removed in the Mejan consciousness. Oh, and thank you."

"What for?"

Sam smiled that slow smile she had learned to like so much from the vids they had sent each other. "For giving me a crack at half a society."

The Legend of the Three Moons

Once, in the early days of the Mejan, after the Great War, there was a very attractive young man, more handsome than any other in all of the thirteen cities. When he came of age, Zhaykair, mother of the house of Sheli, asked if he would join their family, and he came willingly. The house had a good reputation for the fine lace it produced, and the women of the house were beautiful, their necks long, their shoulders wide, and their skin glossy.

A sister of the house looked on the man with desire and wished to have him for herself alone. The husband saw her beauty, her hair the color of night and her eyes like a dashik flower, and he swore to do anything for her; she made his blood run hotter than any woman he had ever seen. The sister went mad at the thought of him lying with other women, and she made him promise he would resist all others for her sake.

Zhaykair saw what her sister was doing and how it poisoned the atmosphere in the house. She went to the councilor to ask what he thought should be done with the young man.

"We will bring them before us and ask them what is more important, the peace of the house or their love."

So the sister and the husband were brought before the council. The mother gazed at the sister with sadness and said, "I cannot believe that you would disturb the peace of the house this way."

The sister began to cry. The husband jumped up, his hand raised against Zhaykair. When the sister saw what he intended to do, she threw herself upon him, but not before he had struck the mother.

By law, the husband had to be given back to the sea for striking a mother. The sister refused to let him go alone, and they returned to the sea together.

Zhaykair could not bear the thought of what had happened in her house and the sister's betrayal, and she followed them soon after. The sea in her wisdom wanted to make a lesson of them and gave the three lovers to the sky.

And now the sister, who never wanted to share the young man with another, must share him with Zhaykair every night. Sometimes it is the sister who is closer and sometimes the mother, but only for a short time does the sister ever have him to herself.

The next day, Toni met with the women on their own turf again. She was shown into the cental courtyard by a beautiful young woman wearing the colors of Ishel and Railiu in the thin dark braids scattered through her heavy hair. The air was crisp and the sun bright, and they wandered among the houses, Anash and Thuyene pointing out more of the complex. The first contact team referred to the residences of the families of Edaru as "houses" for the sake of simplicity—in actuality, they consisted of several buildings, with the young girls living in one, the mothers of the youngest children with their babies and toddlers in another, and the grown women with no children below the age of about three standard years in a third. There was also a smaller version of the Edaru common house, with a family refectory and rooms where all could gather and talk, play games, tell stories. Perhaps superficially the setup did resemble a harem, but it obviously wasn't one.

"I hope you did not lose much in the pirate attack," Toni said during a lull in the conversation.

Anash looked grim. "Too much."

"This is the second ship attacked this summer," Thuyene added.

Suddenly, Toni realized how she might be able to get the Mejan to agree to the AIC treaty. Anash was obviously one of Lanrhel's main advisors,

and he would listen to what she had to say. "So you also have a problem with pirates," she said casually.

"Why do you say 'also'?" Anash asked.

"There are many pirates among the stars too. That is the purpose of the Allied Interstellar Community—to form a common defense against the pirates of the sky."

Of course, that wasn't the only purpose: interstellar trade and research were at least equally important, with the emphasis on the "trade." But Toni doubted she could interest anyone on Kailazh in trade with distant points of light that figured prominently in stories told in the evening to pass the time.

"But why should we fear them?" Thuyene asked. "We do not travel the stars, so they cannot attack the ships of the people."

"It's not that easy," Toni said, suppressing thoughts of how the other woman might be spending her nights in the Ishel main house with Kislán. "They might come here."

Anash started. "Attack Edaru? From the sky?"

"Certainly from the sky."

In their surprise, they didn't think to lower their voices when they turned to each other, and Toni was able to capture a rapid but lengthy conversation on her wrist unit.

Finally they turned back to her. "How can that be?"

"As soon as this world was discovered, the news of another culture was known to all the worlds with access to the network of the community of the stars." But, of course, the word she used in the Mejan language wasn't actually "network": the term the first contact team used to approximate the interstellar exchange of information referred to the trade of professional couriers who traveled among the thirteen cities, dispensing messages and news.

"I see," Anash said. "And in this way, we become a part of this community before we even give permission." She used some kind of qualifier for "permission" that Toni was unfamiliar with, but she didn't deem it the right time to ask what it meant. Anash lifted the back of her hand to her forehead, and Toni's heart sank—she was being dismissed.

"Thuyene will see you out of the house," Anash said and turned on her heel.

Together they watched her stride back to the central building. "You should have told us sooner," Thuyene said quietly.

"I didn't know it was so important."

"I believe you. There is much we still do not know about each other."

That was certainly true.

When she returned to Contact House One, she found Sam sitting tensely in his desk chair and Repnik standing next to him, his arms folded in front of his chest.

Repnik turned, not relaxing his defensive posture. The stress lines between his eyes were even more pronounced than usual and his face was pale. "I'm glad you've finally arrived, Donato. I hear you took Sam to meet with the women yesterday without my authorization."

Toni blinked. Sam didn't *need* Repnik's authorization. Certainly, Repnik had seniority, but the experts of a first contact team were free to pursue their research however they saw fit. *She*, by contrast, was only second linguist, so it was a bit more logical for Repnik to boss her around.

"Uh, yes."

"I won't have it. I've already told Sam that he is not to meet with the women again unless I arrange it."

Which meant never. The women refused to negotiate with Repnik, that much was clear.

She looked at Sam, his lips pressed together and misery in his eyes.

Toni at least didn't have much to lose. She could put her neck out where Sam obviously wasn't willing to. "But he's chief sociologist."

"And I'm head of the first contact team."

She couldn't believe it. Either he was so fixated on maintaining complete control of the mission that he had lost it—or there was something he didn't want them to find out.

She looked him in the eye, her hands on her hips. "Maybe we should see what Ainsworth has to say about that. Computer, open a channel to the *Penthesilea*."

"Access denied."

"What?!"

"Access denied," the computer repeated, logical as always.

"Why?"

"Prof. Dr. Hartmut Repnik has restricted access to communications channels. I am no longer authorized to initiate off-site communications without his permission."

The completely mundane thought darted through Toni's mind that she would no longer be able to participate in the AIC discussion groups. As if that mattered right now.

"I don't want you visiting any of the houses of women without my approval, either," Repnik continued, addressing Toni.

"But we're here to learn about these people."

"And the two of you have been conducting unauthorized research. Now if you'll excuse me, I have AIRA business to attend to."

When Repnik was out of the door, Toni turned to Sam. "Unauthorized research?"

Sam shrugged, looking wretched.

Toni dropped into the chair next to him. "So, you still think I'm overreacting?"

Sam didn't respond to her attempt at a joke. "We're stuck, you know. He's going to tell Ainsworth some story about us now."

She propped her chin in her hand. "You must have done something to set him off. Can you think what it might be?"

He shook his head. "I just told him about the meeting with Anash and Thuyene yesterday."

"So he doesn't want either of us speaking directly with the women. But why?"

Sam shook his head, and Toni got up and began to pace. "Look, Sam, he can't get away with this. If Repnik really does contact Ainsworth about us

with some fairy tale, then we'll also have our say, and it should be obvious that he's giving orders that hinder the mission."

"And what if he lies?"

"We have to tell Gates and Moshofski what's up."

"They won't be in until tonight."

They stared at each other in silence for a moment. "I think I need to take a walk."

Sam gave her a weak smile and waved her out the door. "Go. I'll hold down the fort."

Toni walked, long strides that ate up the stone-lined streets. She had devoted most of her adult life to AIRA, and she didn't know what she would do if they threw her out. Given the number of interstellar languages she could speak, there would always be jobs for her, but if she went into translating or interpreting, she would no longer be involved in the aspect of language she enjoyed most, the puzzle of an unknown quantity.

At least she wouldn't have to work with any more ceremonious ants for years on end.

The weather was turning, appropriate to her mood, the gray-green sky heavy with the threat of rain. Toni made her way through narrow side streets to the sea wall at the south end of town. The green ocean below crashed against the wall, sending shots of spray up to the railing where she stood, and the wind tangled her hair around her face. She pulled her leather cape tighter around her body and gazed out to sea. The lacy rings of sunset probably would not be visible tonight, blocked out by the coming storm.

She heard a footstep behind her and turned. Kislan. He gazed at her with eyes that matched the sea, and she realized she had come out here close to the docks hoping they would run into each other.

He raised the back of his hand to his forehead and she returned the gesture. "Sha bo sham, Kislan."

"Sha bo sham, Toni."

Her name in his language sounded slower, more formal, less messy, the "o" rounded and full, the syllables distinct and clear. She wondered what "Antonia" would sound like on his lips. She'd never liked the name, but she thought she might if he said it.

"How do you greet a friend, someone you are close to?" Toni asked.

"Sha bo foda," he said. "Dum gozhung 'sha.'" Or simply "sha."

"Can we use 'fo' and 'foda' with each other?" she asked, offering her hand in the gesture of her homeworld.

He nodded, ignoring her hand. He didn't want to use the informal "you" form with her. He wouldn't take her hand anymore either, although he took Thuyene's when he was only leaving for an afternoon. But then, Thuyene was one of his wives, and she most certainly was not. She leaned her hip on the railing, gazing at the gray-green sea below the dark gray sky. There was no reason to feel hurt and every reason to feel relief. He was a part of the Ishel family, and she still didn't understand the way loyalty was regarded in these complex relationship webs. Not something to get messed up with.

Tears began to collect at the corners of her eyes and she wiped them away angrily. To her surprise, Kislan turned her to him and took her chin in one hand.

"Tell me," he said. The Mejan very rarely used the command form and there was something shocking about it. It startled Toni into more honesty than she had intended.

"This is all so difficult."

He shook his head slowly and she gave a humorless laugh. Then her intellectual knowledge managed to seep through her emotional reaction. He wasn't disagreeing with her.

She twisted her face out of his hand and turned around to grip the railing at the top of the sea wall. A pair of arms encased in soft leather came around her and a pair of hands with their strange, wonderful webbing settled on hers. "You don't understand. It is not allowed for us to speak so with each other."

His chest was wide and hard against her back, welcome and strong. She had the unrelated, illogical thought that he probably had the high lung capacity of most of the Mejan, and wondered how long he could stay underwater comfortably.

"Al," Toni said, yes, unsure what exactly she was saying "yes" to.

Then there were a pair of lips, soft and warm, against the back of her neck, and it was too late to consider anything. She was in way over her head, infatuated with a man who had about a dozen official lovers.

His arm moved around her shoulders and he steered her away from the railing along the sea wall, away from the city. "It hurts me to see you weep. I would keep you from being alone."

To their left, the stone walls were painted in bright colors, colors to make the heart glad, shades of yellow and red and sea green.

She pulled herself together and dried her cheeks with the back of her hand. "It's no good. We barely understand each other."

"You speak our language very well."

"It's more than that. Our ways differ so much, when you say one thing, I understand another. We can't help but see each other through the patterns we know from the cultures we grew up with. Like looking through lace—the view isn't clear, the patterns get in the way."

Kislan shook his head—affirmation, she reminded herself. "Yes, I see. But I would never hurt you, Toni."

"Ah, but you do. I know it's not deliberate, but just by being a man who lives by the rules of the Mejan, you hurt me."

He shook his head again. "It has to do with the relationship between men and women in the culture where you come from?"

"Yes." Toni didn't trust herself with gestures.

They had nearly reached the end of the sea wall, and there were no buildings here anymore. Kislan took her hand in his own webbed one.

"You would want to have me for yourself?" Kislan asked. "Like the sister in the legend of how the moons got into the sky?"

"It is the way things are done in the world I come from," Toni said defensively.

He smiled at her. "That is a story that lives in my heart."

She stopped, surprised. "I thought it was meant to show the People how not to behave, a lesson."

Kislan laughed out loud. "Have you no stories in your culture that are meant to teach but tempt instead?"

Of course they did. Human nature was stubborn and contrary, and no matter what the culture, there would always be those who would rebel, who would see something different in the stories than what was intended. Even in a relatively peaceful, conformist society like that of the Mejan.

"Yes, there are some similarities."

They leaned against the railing and looked out at the harbor of Edaru, at the graceful, "primitive" ships swaying with the waves. The sea was unquiet, the sky still heavy.

Kislan let his shoulder rest against hers. "Although I know nothing about the worlds on the stars, I can understand a little how you cannot always make sense of our way of doing things. The People live all along the coast here, and the rule of the house is the same for all. But the pirates on the other side of the land and on the islands to the east live by rules hard for us to understand."

"What rules do they live by?"

"They have no houses and no loyalty. They buy and sell not only goods but also *zhamgodenta*."

That was a term Toni had not yet heard. "What does *godenta* mean?"

"That is a word for a person who is bought and sold."

Slavery. Sam had been right.

From: Mejan creation myth

Recorded 01.10.157 (local AIC date) by Landra Saleh, sociologist, first contact team, SGR 132-3 (Christmas / Kailazh).

The war between the Kishudiu and the Tusalis lasted so many years and cost so many lives, there were no longer any women left who had known a life without war. Soon there were no longer any men left at all.

The women of the Kishudiu and Tusalis looked around them at the destruction of their homes, saw that there was nothing left to save and no enemies left to fight. Together, they took the last ships and fled by sea.

After sailing for almost as many days as the war had years, they came to a beautiful bay on the other side of the world, a haven of peace, a jewel. Edaru.

Jackson Gates and Irving Moshofski were already there when Toni returned to Contact House One. Two pairs of dark eyes and one pair of gray turned to her in unison when she entered the lab.

"This is unprecedented," Jackson said.

"I hope so," Toni said. "But since this is the only first contact team I've ever been on, my experience is a bit limited."

The men smiled, and the atmosphere became a shade less heavy.

"One of us will have to be here in the lab at all times in case the *Penthesilea* makes contact," Moshofski said. "I checked the systems, and there doesn't seem to be a way for any of us to override Repnik's commands."

"So we have to wait until Ainsworth can do it," Toni said.

The other three nodded.

"I was beginning to wonder what Repnik was up to," Jackson said quietly. "He made a point of telling me you were having an affair with the young man who acted as your chauffeur from the landing base."

Toni swallowed. "I—no—I'm attracted to him, but, I—no." Then through her embarrassment she realized what he had said. "You mean Kislan wasn't your chauffeur when you first arrived?"

"No. We had a much older man driving us."

"Hm. Was he also a member of the ruling clans?"

"I don't remember offhand the colors he wore in his hair, but I don't think so."

"Interesting." So why had they sent her Kislan?

There was little else they could arrange without contact with the *Penthesilea*, so they said goodnight to each other and sought their separate quarters. With all of the day's upheavals, Toni had almost forgotten the recording she had made in the morning.

It was a goldmine—or an iron mine, from the Mejan point of view. And it wasn't just the long conversation between Thuyene and Anash or the snippets from the other women in the Ishel family: the discoveries started from the unknown qualifier Anash had used when speaking to her. After analyzing the recordings of the women's language for similar occurrences of "kasem," she was almost certain it was a possessive pronoun.

Both the possessive and the genitive were unknown in the men's language—the linguistic forms for ownership.

Toni leaned back in her chair and regarded the notes she had made in hard copy, the circles and question marks and lines and arrows. So what did she have? She had phonetic differences that seemed to indicate that the men's language had evolved out of the women's language and not the other way around. She had a gendered language in which the genders of the nouns didn't match up with gendered forms of address. She had warriors being named in one breath with pirates and pirates being named in one breath with language. She had a language spoken by men and named after the sea—and the sea was associated with the mother. She had grammatical cases that didn't exist in the men's language, a pairing that normally would lead her to conclude that the "secondary language" was the formalized, written language. If you looked at Vulgar Latin and Italian or any other of the common spoken languages in the European Middle Ages on Earth, it was the written language that had maintained the wealth of cases, while the romance languages that evolved out of it dispensed with much of that.

But the Mejan had no written language.

She had a boss who was doing his utmost to keep them from learning too much about the culture of the women.

And she had a man with eyes the color of a stormy green sea. A man who was married to about a dozen women at once.

All she had were questions. Where were the answers?

The next morning, Toni found Kislan on the docks, speaking with a cap-

tain of one of the ships belonging to his family. It probably would have been more logical to seek out Anash, but Toni didn't feel very logical.

When he saw her striding their way, Kislan's eyes lit up, and her gut tightened in response. She touched her forehead with the back of her hand. "Sha bo dam," she said, using the plural second person. "I hope I'm not interrupting anything?"

Kislan nodded denial. "We are expecting a shipment of leather goods, and I merely wanted to see if it had arrived." He introduced Toni to the captain, Zhoran. She noted the threads braided into his hair, saw that he too wore the colors of both Lanrhel's family and the Ishel, and she looked at him more closely. His coloring was lighter than Kislan's and he was obviously older, his golden-brown hair showing the first signs of gray at the temples. The bone structure was very similar, though. She wondered if they were brothers.

Toni touched Kislan's elbow briefly. "May I speak with you alone?"

"Let's go to the office."

Toni followed him a short way down a street leading away from the docks, away from the busy, noisy atmosphere like that of any center for trade and travel. Despite the presence of horses and carriages, despite the color of the vegetation on the hills and the scent of the air, it reminded her a little of the many transit stations between wormhole tunnels that she had passed through on her travels. It looked nothing like them, but there was an energy level, an atmosphere, which was much the same.

Kislan had a small office in the rambling administration building of his family's trading business. On a table in the center of the room stood a counting machine similar to an abacus, and against one wall was a heavy door with a lock, the first lock Toni had even seen on Kailazh. But no desk. With no system of writing, there was apparently no need for a desk.

When the door was closed behind her, Kislan pulled her into his arms and held her tightly. "Time has crawled by since you left me yesterday," he murmured next to her hair.

The words and the arms felt incredibly good, but Toni couldn't allow herself to get involved with him, especially when she still didn't know whether fooling around outside the house was a sin or not. To judge by the legends she was familiar with, trying to monopolize a sexual partner was definitely a sin. That was enough of a problem by itself.

She slowly disentangled herself from Kislan's embrace. "I didn't seek you out for this. I wanted to ask you about something I don't understand, something that might help me understand more."

"Yes?"

"In your creation myth, all the men are killed in the war between the Kishudiu and the Tusalis. But how can the women start a new society without men? Is there any explanation in the myth for that?"

Kislan shrugged. "What explanation is needed? All of the men died; the warriors, *zhambainyanar*."

"Hainyan? I don't know that word yet. What does it mean?"

"Hainyan is the word for the man when a man and a woman are together as a family."

"But I thought that was 'maishal'?"

"No, no. Hainyan is an old word. For the way it used to be. Much as you told us in the land you come from." He seemed to be both repelled and fascinated by the thought, and Toni remembered how he and Anash and Thuyene could only understand the marriages of Terran and Martian culture in terms of possession.

If Toni was right, and "yanaru" was the word for woman in Alnar ag Eshmaled, then the root of "hain-yan" could be "over-woman."

A husband—like on the world she came from.

"But that still doesn't explain how the Mejan came to be," she said.

"They made their slaves their husbands." This time he used the word "maishal."

Toni stared at him. The women had owned the men when they first came here. Their language had possessive cases, the men's language—the language evolving from the dialect of the slaves?—did not. And the pirates to the east, the men who kept slaves—was the word for pirate perhaps the original word for men in the women's language? That would explain why they had been discussing "pirates" when Toni asked if she could learn their language.

Suddenly things started coming together for her like a landslide. And she was almost certain Repnik had figured it out—which was why he was doing his best to hinder their research.

Because he couldn't be chief linguist on a planet where the chief language was a women's language.

She wondered what had really happened to Landra Saleh.

"I must speak with Repnik."

"Why?"

"I think I know now why he was trying to forbid me to talk to the women."

"He did that?"

"Yes."

"But how can he have the authority? Authority belongs to the mother." *Tandarish derdesh kanezha tajanar.* He used the attitude particle "der-" for "a fact that cannot be denied."

Toni stared at him, her mind racing. *Authority belongs to the mother.* *Tandarish—tajanar.* "Tan" and "tajan" could well have the same root, which would mean the authority of the mother was even embedded in the word itself.

She pulled a notebook and pen out of her shoulder bag, sat down in one of the chairs, and jotted down the possible cognates with the women's language, along with the old word for husband. And slave. She was trying to come up with a cognate for the first half of the word "godent" when Kislan interrupted her.

"What are you doing?" he asked, sitting down in the chair next to her and peering over her shoulder.

She didn't have any words for what she was doing in his language and so she tried to describe it. "I have an idea about the language of the People, and I wanted to make the symbols for the words before I forget."

"I have seen the men of the contact team do this before, but I thought it was something like painting." He laughed out loud. "I didn't understand,

none of us did. Among us, the men are not responsible for making *dalonesh*."

Toni wasn't familiar with the last word. "What does *dalonesh* mean?"

Kislan shrugged. "Events, history, business—anything that should be passed on."

Records. He was speaking of records. But in order to have records, you had to have a written language.

"Rodela," Toni murmured. They had been even more dense than she had thought. The crocheting the women did was *writing*, making the records of important meetings, and who knew what else.

"Yes," Kislan said, his voice thoughtful. "That means that among the people from the sky both men and women learn *rodela*?"

Both men and women learn crocheting. Toni's brain translated for her stubbornly and she had to laugh. "I'm sorry. Repnik had translated 'rodela' with a word for a hobby among women on the world where he comes from. The answer to your question is yes, on the worlds I know, Earth, Mars, Jyuruk and Admetos, we all learn writing."

"I have often thought it would be good to know, but men are not regarded as masculine if they learn *rodela*."

Men are not regarded as masculine if they learn crocheting. Certainly not. That fit very well into the mind set the first contact team had brought with them to Christmas. But in order to understand Kislan's statement, more than "rodela" would have to be changed. Toni suspected to get at the underlying attitude, you would have to change the gender of the words as well: *Women are not regarded as feminine if they learn writing.*

That was the attitude that was behind what Kislan had said. He had not mentioned "rodela" like something he could easily do without, he had mentioned it with regret, like something being denied to him. Even if you translated the words with their correct meanings, the sense of the sentence could not be communicated.

Toni took a deep breath. Suddenly everything about the Mejan looked completely different. The world had tilted and turned upside-down, and now the Christmas tree was right-side up. She couldn't believe how blind they had been, how blind *she* had been. Everyone except, perhaps, Repnik.

Of course, the first contact team had been plagued by bad luck from the start—or was it?—with no sociologist, no one to talk to the women, and a xenolinguist who was deliberately deceiving everyone. But that did not excuse the extent of the misunderstanding, and it certainly did not excuse her. She had felt something was off, but she had allowed her own inherited attitudes to keep her from figuring out what it was.

"And the wall hangings," she asked, getting up and beginning to pace. "Those are. . . ?"

He shrugged. "Genealogies, histories, famous stories. Fashar."

Documents, books perhaps. Another word that would have to be changed. Translated as "lace" in the present dictionary. The books, the writing, had been there right in front of their faces all the time.

She stopped pacing and faced him. This had implications for their whole analysis of the language. "I have to speak with Repnik."

"Dai eden mashal." Which meant the same as "good" but was expressed in verb form. And if she had said the same thing to another woman, it would have been "dai desh mashal."

But she would probably never trust her knowledge of another language again.

The story of the young poet

Recorded 30.09.157 by Landra Saleh, retranslated 06.12.157 (local AIC date) by Antonia Donato.

As long as she could remember, Zhaykair had only one dream—to become the greatest poet the Mejan had ever known. All young girls are taught the basics of writing, but Zhaykair would not stop at that. She begged the women of her village to teach her their way with words, the patterns they created, and she quickly found the most talented writer among them. Saymel did not belong to Zhaykair's house, but the families reached an agreement, and the little girl was allowed to learn from Saymel, although the job of Zhaykair's house was raising cattle.

But before she had seen nine summers, Zhaykair had learned all Saymel had to teach her. She begged her clan to allow her to go to the city of Edaru, where the greatest poets of the Mejan lived. Her mothers and fathers did not want to send her away, but Saymel, who could best judge the talent of the young girl, persuaded them to inquire if the house of Mihkal would be willing to take her on.

The elders sent a messenger to the Mihkal with some of Zhaykair's poems. They had feared being ridiculed for their presumption, but the messenger returned with an elder of the house of Mihkal to personally escort Zhaykair to the great city of Edaru.

Zhaykair soon learned all the Mihkal clan could teach her. Her poetry was in such great demand, and there were so many who wanted to learn from her, that she could soon found her own house. Her works now grace the walls of all the greatest families of the Mejan.

Toni found Repnik in the main square of Edaru, leaving the school of the house of Railiu, where boys memorized a wealth of Mejan legends and songs and were taught basic mathematics and biology and navigational skills.

But no crocheting.

"Sir!" Toni called out, rushing over to him. "I need to speak with you. Can we perhaps return to the contact house?"

"You can return to the contact house, Donato. I am going out to lunch with Sebair, the rector of the Railiu school."

Sebair strolled next to Repnik with his hand to his forehead, and Toni returned the gesture, greeting him less graciously than she should have.

"Sha bo sham, tajan," Sebair said, smiling anyway.

"Mr. Repnik," Toni persisted. "I really need to speak with you. It's very important."

"I'm sure it is. But you have a job to do, and what you have to tell me can wait until I get back to the lab."

Toni took a deep breath. "I know. What you've been trying to hide."

Repnik's stride faltered, but his confidence didn't, at least not as far she could tell. "I have no idea what you're talking about."

"I know that as far as the Mejan are concerned, I am the head of this team. And I know that they *do* have a system of writing."

Repnik stopped in his tracks. "You know *what*?"

So he hadn't gotten that far. He wasn't a good enough actor to fake that stare of surprise. Toni felt a surge of satisfaction.

"And I also know that you've been trying to hinder the research of the first contact team."

An angry flush covered the chief linguist's face. "Ms. Donato, you are hallucinating."

"I don't think so. Don't you want to know what the system of writing is?"

Repnik snorted. "There is none. I knew before you came that a woman dealing with a woman's language would lead to problems."

Finally, Toni could no longer control her temper. "Obviously not as many problems as a man dealing with a men's language," she spat out.

She saw his hand come up as if the moment were being replayed in slow motion. She knew it meant he was about to slap her, but she was too surprised to react. From that observing place in her mind, she saw Sebaïr start forward and try to stop Repnik, but then the flat of his palm met her cheek, and the sting of pain sent tears to her eyes.

She lifted her own palm to cover the spot, while utter silence reigned in the main square, everyone gaping at her and her boss. Then, just as suddenly, chaos broke out. The men who had been going about their business only minutes before converged upon Repnik and wrestled him to the ground. Toni stood frozen, staring at the scene in front of her.

Repnik had struck a mother.

The old man struggled beneath the three young men who held him down. "What is the meaning of this?" he asked in Alnar ag Ledar.

Suddenly Lanrhel was there next to them. Toni wondered when he had joined the fray. "Let him rise."

The voluntary guards pulled Repnik to his feet, and Lanrhel faced him. "You know enough of our laws to know that to strike a mother means you must be returned to the sea."

"*She* is no mother."

Lanrhel didn't even bother to answer, turning instead to Toni. "Tajan, do you need assistance?"

Toni was too confused for a second to come up with the right gesture and she shook her head. "No, it's nothing. Let him go, please."

A firm hand took her elbow. Anash. "Come."

"But Repnik . . ."

"Come. He must go with Lanrhel now."

Toni allowed herself to be led away to the common house and a small, private room. A basin of water was brought, and Anash pushed her into a chair and bathed her stinging cheek gently.

"You won't really throw him out to sea, will you?" Toni finally asked.

"I don't know yet what we will do. We have a dilemma."

They certainly did. Toni didn't even know if Repnik could swim. And if

he could, he wouldn't be allowed to swim to shore. She didn't like him, but—a death sentence for a slap? “You can't give him back to the sea. He's not from this world. Where he's from, it's not a crime to slap a woman.”

“Then it should be,” Anash said grimly.

Anash was defending her, but it didn't feel like it. “Don't do this to him.”

“How can you speak for him after all the disrespect he has shown you?”

If Toni hadn't felt so horrible, she almost would have been tempted to laugh. That was the kind of reasoning shown by aristocracies and intolerant ruling powers throughout the ages. Repnik hadn't been right to try to keep the truth from the first contact team, but he hardly deserved to walk the plank.

Until this morning, she'd thought these women needed to be protected from the likes of Repnik. Now everything was on its head, everything.

As if to prove her point, Kislan entered the room, shutting the door gently behind him. He stared at her expectantly, and she finally remembered to greet him.

“Sha bo sham, Kislan.”

“Sha bo sham, Toni.” He approached and gave her a kiss, right in front of Anash.

His clan knew. They'd given him to her. Like a present. She was the visiting dignitary, and he was her whore. Had he thrown himself in her way willingly, or had he been sent?

Toni pushed herself out of the chair and wandered over to the window. The central square of Edaru was unusually quiet for this time of day, just before the midday meal. People stood in small groups of two or three, speaking with earnest faces, spreading the news. By evening, the whole city would know that a man of the people from the sky had committed a grave crime against the sole woman of the contact team. If nothing was done, not only would Anash's authority be undermined, the first contact team would be seen as lawless and immoral.

She lifted her gaze above the rooftops of the buildings on the other side of the square, to the lacy pattern formed by the rings of Christmas in the sky.

The sky. The old man wouldn't thank her, but she might have a way to save him, keep him from being thrown into the ocean, send him home safely.

“I have an idea,” she breathed. “Criminals are returned to the sea, because that is where they are from, yes?”

Anash shook her head, watching Toni carefully.

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"And the people of the first contact team do not come from the sea, they come from the sky."

"You are right," the older woman said. "This might be a solution."

She was the visiting dignitary, she had to remember that. "It is the only solution we can consider," she said in what she hoped was a voice of command.

Anash gazed at her as an equal. "Then we will give him back to the sky."

The ceremony took place on a sunny but cool afternoon three days later. Before arrangements could be made with the *Penthesilea*, they had to wait until the ship made contact itself. The taciturn Moshofski handled that end once Ainsworth overrode Repnik's commands. Toni spent her time at the house of Ishel and in consultations with Lanrhel. Her only contact with Repnik was one-sided shouting matches. Repnik, who was being kept under guard in the common house, had made it very clear that he intended to take Toni to interstellar court on charges of mutiny and conspiracy.

And if AIRA believed him, she was saving him to dig her own grave.

A construction resembling a pier was hastily built on a plain outside of town, between Edaru and the landing base. Although it wasn't conveniently located for the town residents, several thousand people had made the trip to see Repnik returned to the sky. With his head shaved, the old man looked even older, gaunt and bare and bitter. Toni wished she didn't have to watch, let alone participate. The rest of the first contact team had elected to stay at home.

With a guard on either side, Repnik was accompanied down the waterless pier, Anash, Toni and Thuyene a few paces behind. A shuttle from the *Penthesilea* waited at the end, Lanrhel and Ainsworth beside the door. Finally Repnik and his guards reached the councilor, and Lanrhel announced in his booming voice, "Mukhaired ag Repnik bonaashali der-ladesh." *Repnik's shame will now certainly be purged.* He then ordered the older man to strip. When Repnik refused, his guards stripped him forcibly.

Toni looked away. His humiliation was painful to see, his skinny, white flesh hanging loosely on his bones. He would hate her for the rest of his life, and she could hardly blame him.

Then Anash's hand on her elbow was urging her forward, pressing a bit of lace into her hand. A written record of his time on Christmas. Toni looked up and flung the *fashar* through the open doors of the shuttle.

Ainsworth nodded a curt goodbye, turned, and followed Repnik. The doors whisked shut and the shuttle lifted off the ground.

After the ceremony, Anash led her to a small carriage to take her back to town. She was no longer surprised that the driver was Kislan again, and only a little surprised that Anash didn't join them.

Kislan was her present, after all.

If only she knew what to say, what to feel. He was still just as handsome, but he didn't draw her in the same way. She didn't like what it said about herself that she suddenly saw him so differently. Now he was a

supplicant, whereas before he was exotic and distant, a man of good standing in a powerful clan.

She couldn't have the same feelings for someone who had been given to her.

"What's wrong, Toni?" Kislán asked gently after she hadn't spoken for minutes. His pronunciation of her name was a little like that of her Italian grandmother, and she had the odd impulse to cry.

"I don't know. I can't figure anything out."

"I thought you did not like Repnik?"

"No."

"Then why are you upset?"

"Things are so much stranger here than I thought. I'm confused. I need to think things out."

"And thinking things out includes me, yes?"

For a moment, Toni couldn't answer. "Yes."

She arrived at Contact House One just as the lacy show of evening was beginning again, her heart and mind a mess. The world was on its head and there were holes in the sky.

At the sound of hooves and wheels on the cobblestones, Sam, Jackson, and Moshofski came out to the door of the courtyard, their expressions solemn.

Sam helped her down. "Ainsworth contacted us from the shuttle. They had to sedate Repnik."

Toni closed her eyes briefly. "I'm so sorry."

"No need, Donato," Jackson said. "Repnik was deliberately hindering AIRA work."

"We've started wondering what really happened to Landra," Moshofski added.

"I've been wondering about that too."

"We mentioned our suspicions to Ainsworth, and there will be an investigation," Jackson said. "And given the social structures on Christmas, you're to head the first contact team in future when dealing with the Mejan."

A smile touched Moshofski's serious features. "But in the lab, I'm the boss. Seniority, you know."

She could hardly believe it. "Certainly."

"Sam baked a cake to celebrate the two promotions," Jackson said. "Shall we test his talents?"

"I'll follow you in a minute."

The three men filed into the contact house, and she came around the carriage to Kislán's side. "I never wanted to hurt you."

He gazed back at her, not answering.

Toni looked away, at the sky above, the fabulous sunset over Edaru. "I'm sorry. I will come see you again soon and we can talk. Perhaps I can teach you our way of writing."

His eyes lit up. "Yes." He placed his free hand on her shoulder and nodded at the sky. "It's beautiful, isn't it?" *It is-in-a-state-of-beauty, yes?*

Toni shook her head. "Yes." ○

WHEN BURNING OFF FINGERPRINTS IS NO LONGER ENOUGH

The rogue geneticist promises
to save your memory on file,
to keep a record of your DNA
—backed up and triple encrypted—
so you can become
the woman you were
once the authorities stop searching.

You know you can't trust him,
but there is no other escape route.

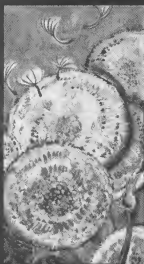
He gives you options:
you can become jalapeño,
your insides aching with the burden
of sharp hot seeds

or perhaps dandelion,
swaying in a field
with millions of other felons.

You will be so safe
that you could even hide
as wheat in the paste
that holds your wanted poster
to the wall
of the police station.

Illustration by June Levine

—Cathy Tacinelli



THE LONG WAY HOME

James Van Pelt

James Van Pelt lives in western Colorado with his wife and three sons. One of the finalists for the John W. Campbell Award for Best New Writer in 1999, he teaches high school and college English. His fiction has appeared in, among others, *Asimov's*, *Analog*, *Realms of Fantasy*, *Dark Terrors 5*, *Dark Terrors 6*, *Talebones*, *The Third Alternative*, *Weird Tales*, and *Alfred Hitchcock's Mystery Magazine*. His first collection of stories, *Strangers and Beggars*, was published in 2002 by Fairwood Press.

Marisa kept her back to the door, holding it closed. "Another few minutes and they will have made the jump. You can go home then."

"The war has started," said Jacqueline, the telemetry control engineer. Her face glowed red with panic. "I don't matter. The mission is over. They made the jump *four hours ago*."

Marisa swallowed. If Jacqueline grabbed her, there would be little she could do. The woman outweighed her by thirty pounds, and there were no security forces to help. "Jacqueline, we've come so far."

The bigger woman raised her fist. Marisa tensed, but didn't move. Her hands trembled behind her. For a moment, Jacqueline's fist quivered in the air. Beyond her, the last of the mission control crew watched. Most of the stations were empty. The remaining engineers' faces registered no expression. They were too tired to react, but Marisa knew they wanted to leave just as badly.

Then Jacqueline dropped her hand to her side. Her eyes closed. "I don't make a difference," she whispered.

Marisa released a held breath. "We're part of mankind's greatest moment. There's nothing you can do out there." She nodded her head toward the door. "We can't stop what's happening, but we can be witnesses to this. There's hope still."

Several monitors displayed a United States map and a Florida one inset in the corner. Both showed bright yellow blotches. "Areas of lost communication" the key read underneath. Major cities across the country;

most of the southwestern coast and northeastern seaboard, glowed bright yellow. In Florida, yellow sunbursts blotted out Miami and Jacksonville. As she watched, another one appeared on Tampa. She glanced at Mission Control's ceiling and the half-dozen skylights. At any moment, the ceiling could peel away, awash in nuclear light. She expected it, expected it much earlier, but she'd stayed at her station, recording the four-hour old signals from the *Advent* as it sped toward the solar system's edge, already beyond Neptune's orbit. Would she have any warning? Would there be an instant before the end when she would be aware that it had happened?

Jacqueline sat heavily at her console, and Marisa returned to her station. The data looked good, but it had looked good from the beginning, six years earlier, when the massive ship ponderously moved out of orbit, all 14,400 passengers hale and hearty. There had been deaths on board, of course. They expected that. Undetected medical conditions. Two homicides. Two suicides, but no major incidents with the ship itself. The hardware performed perfectly, and now, only a few minutes from when the synchronized generators along the ship's perimeter powered up to send the *Advent* into juxtaspace, Mission Control really was redundant. Jacqueline was right.

The room smelled of old coffee and sweat. Many of the controllers had been at their stations for twenty hours or more. As time grew short, they split their attention between their stations and the ubiquitous news displays. A scrolling text readout under the graphics listed unbelievable numbers: estimated dead, radiation readings, cities lost.

Marisa toggled her display. She wanted readouts on the juxtaengines. Mankind *was* going to the stars at last, even if there might be no Earth left to return to, if they could duplicate the ship to bring them back. "It's easy, having no family," she said under her breath, which wasn't quite true. Her grown son lived in Oceanside, a long commute from southern L.A., but they only talked on the phone at Christmas now. She had to check his photograph to remind herself of what he looked like. A station over, an engineer had his head down on his keyboard, sobbing.

Dr. Smalley was the only controller who appeared occupied. He flicked through screen after screen of medical data. The heartbeats of the entire crew drew tiny lines across his display. He looked at Marisa. "We won't know what happens when the shift happens. What will their bodies go through? What a pity they can't signal through the jump."

"If they make the jump at all," moaned Jacqueline.

"We'll know in three minutes," said Marisa. "Regardless of what happens here, we will have saved ourselves."

Dimly, through mission control's thick walls, sirens wailed up and down. The building vibrated, sending a coffee cup off a table's edge and to the floor.

"Maybe if we'd spent the money here, where it could do some good, we'd never have come to this," said Jacqueline. "We bankrupted the planet for this mission."

Dr. Smalley studied the heartbeats from the ship. "They're excited. Everyone's pulse is high. Look, I can see everything that's happening in their bodies." He waved a hand at his display. "Their individual transmit-

ters give me more information than if I had them hooked up in a hospital. I wish I was with them."

"Everyone wishes they were with them," said Marisa.

Jacqueline said, "Don't you have a word for it, Doctor, when the patient's condition is fatal, so you decide to try something unproven to save her? That's what we're doing here, aren't we? Humanity is dying, so we try this theoretical treatment."

The countdown clock on the wall showed less than two minutes. The floor shook again, much more sharply this time.

"Please, a few more seconds," Marisa said to no one.

So much history happening around her: the first colonial expedition to another star system, and the long-feared global nuclear conflict. The victor had to be the explorers. The names passed through her head: Goddard, Von Braun, Armstrong, and the rest of them. It was a way to shut out the death-dealers knocking at the door.

"It's an experiment," said Jacqueline, edging on hysteria. "We've never sent a ship even a tenth this big. We've never tied multiple juxtaengines together. What if their fields interact? Instead of sending the ship in one piece, it could tear it apart."

"It was too expensive to try out," Marisa snapped. "It was all or nothing."

"You've been listening to the defeatists," said Dr. Smalley. "The theory is perfect. The math is perfect. In an instant, they will be hundreds of light-years from our problems."

Marisa clutched the edge of her monitor. The countdown timer clicked to under a minute. I'm a representative of mankind, she thought. For everyone who has ever wanted to go to the stars, I stand for them. She wished she could see the night sky.

Dr. Smalley hunched toward his computer as if he were trying to climb right through. Jacqueline stared at the television screens with their yellow-specked maps. The images wavered, then turned to grey fuzz. She pressed her knuckles to her mouth.

"Ten seconds," said Marisa. "All systems in the green."

The countdown ticker marched down. Marisa remembered a childhood filled with stories of space, the movies and books set in the universe's grand theater, not the tiny stage lit by a single sun. If only she could have gone too, she could have missed the messy ending mankind had made for itself. The first bombs had exploded yesterday morning. Over breakfast, she'd thought it was a hoax. No way people could be so stupid. But the reports continued to come in, and it wasn't a joke, not in the least.

Eyes toward their readouts, the control engineers monitored *Advent's* last signals. Already at near solar-escape velocity, the *Advent* would leap out of the solar system, riding the unlikely physics of juxtaspace.

"Three . . . two . . . one," someone said. Marisa's screen flipped to the NO SIGNAL message. Analysis indicated the ship had gone. A ragged and weak cheer came from the few engineers in the room.

"She's made the jump," Marisa said. She envisioned the *Advent* obscured in a burst of light as the strange energies from the juxtaengines parted space, allowing the giant ship its trans-light speed journey. For a moment, the space program existed all on its own, separate from the

news broadcasts and progress reports, far from the "Areas of lost communication."

"No," said Dr. Smalley. "There should be no telemetry now. They're gone." He touched his fingers to his monitor. Marisa moved to where she could see what he saw. The heartbeats on his screen still registered. Brain waves still recorded their spiky paths. He flicked from one screenful of medical transmissions to the next.

"How is that possible?" said Marisa. Jacqueline stood beside her. Other engineers left their stations to crowd behind Smalley's chair.

"They're getting weaker," said Jacqueline.

"No, no, no," said Smalley. His fingers tapped a quick command on his keyboard. A similar display with names and readouts appeared on the screen, but this one showed no activity in the medical area.

"What is that?" asked Marisa. How could there be transmissions? The *Advent* was beyond communication now. They'd never know if she reached her destination. Light speed and relativity created a barrier as imposing as death itself.

"It's their respiration," said Smalley, his voice computer-calm. "They're not breathing." He switched back to the heartbeats. Many of the readouts now showed nothing. A few blinked their pulses slowly, and then those stopped too. Smalley tapped through screen after screen. Every pulse was now zero. Every brain scan showed a flat line.

Marisa's hands rested on the back of Smalley's chair. She could feel him shaking through her fingers. "Check their body temperatures," she said.

He raised his head as if to look back at her. Then he shrugged in understanding. The new display showed core temperatures. As they watched, the numbers clicked down.

"Is it an anomaly?" asked someone. "Are we getting their signals from juxtaspace?"

"The ship blew up," said Jacqueline.

Marisa said, "No. We would have received telemetry for that." She held Smalley's chair now so that she wouldn't collapse. "It's their real signals from our space." Her face felt cold and her feet numb. A part of her knew that she was within an instant of collapsing. "The *Advent* left, but it didn't take *them*."

Jacqueline said, "Worst-case scenario. It was a possibility that the multiple engines wouldn't work the same way as single ones. We dumped everyone into space." Her voice cracked.

"They're dead," said Marisa as the room slowly swooped to her right. I'm falling, she thought. What would a telescope see if it could see that far? After the flash of light? Would it see 14,400 bodies tumbling? What other parts of the ship didn't go?

Her head hit the floor, but it didn't hurt. Nothing hurt, and she was curiously aware of meaningless details: how the tiled floor beneath her felt gritty, how ridiculous the engineers looked staring down at her. Then, oddly, how their faces began to darken. What a curious phenomena, she thought. The fraction of a second before she knew no more, she realized that their faces hadn't darkened. It was the skylights above them. They'd gone brilliantly bright. Surface-of-the-sun bright.

We're not going to the stars, she thought, as the heat of a thousand stars blasted through the ceiling. She would have cried if she had had the time.

Who has died like this? So sudden, the walls shimmered. Then they were gone. The air burst away, much of the ships innard's remained, but twisted and ruptured. Torn into parts. The stars swirl around us, and all the eyes see. We all see what we all see, but there isn't a "we" to talk about, just a group consciousness. The 14,400 brains frozen in moments, the neurons firing micro-charges across the supercool gaps creating a mega-organism, still connected. And we continue outward, held together loosely by our tiny gravities, sometimes touching, drifting apart, but never too far. Pluto passed in hardly a thought, and then we were beyond, into the Oort Cloud, but who would know it? The sun glimmered brightly behind us, a brighter spot among the other spots, but mostly it was black and oh so cold. Time progressed even if we couldn't measure it. Was it days already, or years, or centuries? Out we traveled. Out and out.

Jonathan shifted the backpack's weight on his shoulders as he tramped down the slope toward Encinitas, then rubbed his hands together against the cold. He'd left his cart filled with trade goods in Leucadia, and it felt good not to be pulling its weight behind him. The sun had set in garish red an hour earlier, and all that guided his footsteps was the well-worn path and the waves' steady pounding on the shore to his right. No moon yet, although its diffuse light wouldn't help much anyway. When he'd crested the last hill, though, he'd seen the tiny lights of Encinitas' windows, and knew he was close.

He whistled a tune to himself, keeping rhythm with his steps. The harvest was in, and it looked like it would be a good one this year for Encinitas. They'd wired two more greenhouses with grow-lights in the spring, and managed to scare up enough seed for a full planting. For the first time, they might even have an excess. If he could broker a deal with the folks in Oceanside, who lost part of their crop to leaf blight, it could be a profitable winter.

A snatch of music came through the ocean sound. Jonathan smiled. Ray Hansen's daughter, Felitia, would be there. Last year she'd danced with him twice, and he imagined her hand lingered as they passed from partner to partner . . . but she'd been too young to court then. Not this year, though. It was going to be a good night. Even the icy-cold ocean breeze smelled clean. Not so dead. Not like when he was a boy and everyone called it the "stinking sea."

He slowed down. The gate across the path should be coming soon. It stopped the flock of goats from wandering off during the summer. In the winter, of course, they were kept in the barns so that they wouldn't freeze. Yes, Encinitas was a rich community, to be able to grow enough to feed livestock. Felitia would be a good match for him. She was strong and lively, and her father would certainly welcome him warmly if he was a part of the family. Goat's milk with every meal! He licked his lips, thinking of the cheese that was a part of the harvest celebration.

But what if she didn't want him?

He slowed even more. What wasn't to want about him? He was twenty, and a businessman, but it wasn't like he was around all the time to charm her, and a year was a long time. Maybe she didn't want to travel from village to village, carrying trade goods. And she was a *bookish* girl. People talked about her, Jonathan knew. That was part of her charm. He buried his hands under his armpits. Did it seem unusually cold suddenly, or was it fear that made him shiver?

The gate rattled in the breeze, which saved him bumping into it. Fingers stiff, he unlatched it. Clearly now, the music lilted from over the hill. He hurried, full of hope and dread.

"Jonathan, you are welcome," said Ray Hansen at the door. Hansen looked older than the last time Jonathan had seen him, but he'd always seemed old. He might be forty, which was really getting up in years, Jonathan thought. Beyond, the long tables filled with seedling plants had been pushed to the wall. Everyone in the village seemed to be there. The Yamishitas and Coogans. The Taylors and Van Guys. The Washingtons and Laffertys. Over a hundred people filled the room. Jonathan smiled. "I've come to see your daughter, sir."

The old man smiled wanly. "You'll need to talk to her about that."

Jonathan wondered if Hansen was sick. He seemed much thinner than Jonathan remembered him. Probably the blood disease, he thought. Lots of folks got the blood disease.

The band struck up a reel, and couples formed into squares for the next dance. The caller took his place on the stage. Felitia, in a plain, cotton dress, sat on the edge of a table at the far end of the long room, swinging her feet slowly beneath her. Jonathan edged along the dance floor. The music drove the dancers to faster and faster twirls, hands changing hands, heads tossing. He apologized when a woman bumped him, but she was gone so fast he doubted she'd heard.

Felitia watched him as he made the last few yards, her blue eyes steady, her blonde hair tied primly back. Was she glad to see him? Surely she knew why he was there. He had left her notes every time he passed through Encinitas, and her replies that he retrieved the next trip were chatty enough, but noncommittal. She could have been writing to her brother for all the passion he'd found in them.

He sat next to her without saying anything. Now that she was beside him, the speech he'd practiced sounded phony and ridiculous. The villagers rested when the music ended, talking quietly to themselves. On the makeshift stage, the band tuned their instruments. The two guitarists compared notes, while the trumpet player discreetly blew the spit out of his horn.

"This is nice," said Jonathan. He winced. Even that sounded stupid.

"Yes." Her hands were together in her lap. "How were the roads?"

The band started another tune, and soon the crowd wove through the familiar patterns.

"Fine, I guess." Jonathan decided that the best move would be to leave the room. It was one thing to think grand thoughts while pulling his cart down the seashore roads, but it was quite another to confront her in the flesh. "I did good business in Oceanside."

"It must be interesting, seeing all those places."

Jonathan swelled. "Oh, yes. I've been even further north than that, you know. I even went to San Clemente once. A few of the buildings still stand. I wanted to press on to Los Angeles, but you know how cautious the old folks are."

She looked sideways at him.

He cleared his throat. "Just along the beach. Nothing inland, of course. It's ice from the Santa Ana mountains almost to the sea, but they say the snow field is retreating. It's getting warmer, they say."

Felitia sighed. "The dust went up; the dust will go down. I don't know if I believe it. They can call it 'nuclear winter,' but it's more like nuclear eternity to me." She watched the dancers, her face lost and vulnerable. "Encinitas seems so small."

Jonathan gripped the table's edge. What he wanted to ask was on the tip of his tongue. Everything else sounded trivial, but the timing wasn't right. He couldn't just blurt it out. A thought came to him, and, with relief, he said, "I brought you a present." He slung his backpack off his shoulders and set it between them. Felitia peered inside when he opened it.

"Books!" She clapped her hands.

He dug through the volumes. "There's one I thought you might like especially." At the bottom, he found it. "We need to go outside so I can give it to you." He tried to swallow, but couldn't. Nothing he'd ever done before felt so bold.

She held his hand as they walked away from the dancers. Her fingers nestled softly in his.

Felitia put on a coat and picked up a storm lamp before they went out the back door. The flame flickered before settling into a steady glow.

"What is it?"

Wind pushed against his face, tasting of salt. It could snow tonight, he thought. First snow of the season. He pulled the book out of his jacket and handed it to her. "Here's as far as you can get from Encinitas."

She opened the book, a paperback edition of *Peterson's Field Guide to the Stars and Planets*. By the storm lamp, he could see a color print of the Cone Nebula, a red, clouded background with white blobs poking through.

"Oh, Jonathan. It's beautiful."

Their foreheads touched as they bent over the book.

She turned her face toward his. "My father told me about stars. He said he saw them when he was a boy, before the bad times."

Jonathan glanced up. "My dad said we were going to the stars. His mom helped launch the *Advent*." The uniform black of the night sky greeted him, as indistinguishable as a cave interior. "He said the sky used to be blue, and the sun was as sharp-edged as a gold coin."

He looked down. Felitia's face was only an inch from his own. Without thinking about it, he leaned in just enough to kiss her. She didn't move away, and his question was answered before he asked it.

Later, holding her against him, he said, "They say when the dust clears, we'll see the stars again."

And on a calm night, four years later, after Ray, Jr., had gone to sleep, Jonathan and Felitia stood outside their house in Oceanside.

"Can you see?" said Felitia. "Do you think that's what I think it is?" She pointed to a spot in the sky.

One hand on her shoulder, Jonathan pulled her tight. "I think it is."

A bright spot glimmered for a second. Another joined it.

They stayed outside until they both grew so cold they couldn't stand it anymore.

We feel space. Neutrinos pass through like sparklers in the group body. Gravity heats our skin. We hear space, not through the frozen cells of our useless ears, but through the sensitive membrane of our group awareness. The stars chime like tiny bells. It has a taste, the vacuum does, dusty and metallic, and it doesn't grow old. We go farther and farther and slower and slower, until we stop, not in equilibrium; the sun won. Gradually, we start back. Apogee past. The Oort Cloud. The birthplace of comets. How many years have we gone away?

"Relying on the old knowledge is a mistake." Professor Matsui faced the crowd of academics in the old New Berkeley lecture hall. The new New Berkeley hall wouldn't be done until next year. After a hundred-and-twenty years of use, this one would be torn down. He would miss the old place. "We overemphasize recreating the world we know from the records, but we aren't doing our *own* work. Where is our originality? Where is our cultural stamp on our scientific progress?" He was glad for the new public address system. His voice wasn't nearly as strong as it had been when he was young.

Matsui watched Dr. Chesnutt, the Reclaimed Technologies chair. He appeared bored, his notebook unopened on his study desk. Languidly he raised his hand. "Point," he said. "Would you have us throw away our ancestors' best work? When we allocate money, should we assign *more* on your 'original research' that may yield nothing, or should we spend wisely, investigating what we *know* will work because it worked before? When we equal the achievements of the past, then it will make sense to invest in your programs. Until then, you divert valuable time and valuable funds."

Pausing for a moment to scan the crowd, Matsui took a deep breath. Were the others with him or against him? The literature department was evenly split between the archivists and the creative writers. Biology, Sociology, and Agriscience would lean toward him, as would Astronomy, but the engineers, mathematicians, and physicists would cast their vote solidly with Chesnutt, and, as the former head of the School of Medicine, he had probably coerced everyone in the department to vote his way. "Obviously we must continue the good work of learning from the past, but if we throw all our effort, and funds, into that, we risk creating the same mistakes that destroyed their world. You pursue their wisdom without worrying about their folly. Will you follow them down the road that led to nuclear annihilation?"

Chesnutt chuckled. "You can raise the 'nuclear annihilation' demon all you like. As you know, there is no agreement among historians about

what caused the great die-off. The nuclear exchange may have been the last symptom of a much deeper problem. We will only avoid their fate if we learn from their triumphs."

Heads nodded in the audience.

Matsui finished his speech, but he could tell that Chesnutt had called in all his favors. It didn't matter what value his arguments had, the Research Chair would not gain funding this year. He'd be lucky to hold his committee assignments.

After the meeting, Matsui left the lecture hall in a hurry. He didn't want to deal with the false condolences. The bloodsuckers, he thought. They'll be looking for strategies to make my loss an advantage for their departments in some way or another.

A breeze off the bay cut through his thin coat, sending a translucent veil of clouds across the night sky, and tossing the lights dangling from their poles.

"Wait, Professor," called a voice.

He grimaced, then slowed his pace. Puffing, Leif Henderson, an assistant lecturer in Astronomy, joined him.

"Good speech, sir."

"I'm afraid it was wasted."

"I don't think so. We've got a couple of Chesnutt supporters in the department, but I can tell you the grad students aren't interested in making their names in the field by rediscovering all of Jupiter's moons. The younger ones want to do something *new*."

Matsui pushed his hands deep into his pockets. Maybe he was getting too old for the back-stabbing politics of the university. "Chesnutt has a point. Old Time learning casts a huge shadow. We may never be able to get out from under it, and it doesn't help that whenever original research makes a discovery, the intellectual archeologists dig up some reference to show it's been done before. There's no impetus for innovation."

Henderson matched Matsui's steps. "But the Old Timers didn't know everything. They didn't conquer death. They didn't master themselves." The young man looked into the night sky. "They didn't reach the stars. We should have been receiving the *Advent's* signals for the last fifty years if they made it, or even more likely, they would have come back. They have had four hundred years to recreate their engines."

"I like to think they arrived, and we just haven't built sensitive enough receivers, or maybe three hundred and fifty light years is too far for the signal. What they have to wonder is why *we* haven't contacted them, why we didn't *follow* them. The world has gone silent."

The sidewalk split in two in front of them. Astronomy and the physical science buildings were to the right. Administration was to the left. They paused at the junction.

Matsui looked down the familiar path. He'd walked that sidewalk his entire adult life, first as a student, then a graduate assistant, and finally as a professor. From his first day in the classroom, he had valued creative thought. That is what the academy is about, he had argued. The Old Timers accomplished noble feats, but they are gone. We should make our own mistakes.

"The world is changing, Henderson. The population will be over one billion in a decade. We survived an extinction event four hundred years ago, so we missed being the last epoch's dinosaurs. We fought our way out of the second Dark Ages. As a species, we must be fated for greatness, but we're so damned stupid about achieving it." He kicked at the ground bitterly.

Henderson stood quietly for a minute. In the distance, the surf pounded against the rocks. "It's a pendulum, Professor. This year, Chesnutt won. He won't always. If we're going to push knowledge forward, we will escape our past. We'll have to."

Matsui said, "Not in my lifetime, son. It's so frustrating. Humanity has desires. It must. But what they are and how it will go about getting them will remain a mystery to me. There's a big picture that I can't see. Oh, if only there was a longer perspective, it would all make sense."

Henderson didn't reply.

"I'm sorry," said Matsui. "I'm an old man who babbles a bit when it gets late at night. I wax philosophic. It used to take a couple of pints of beer, but now cool night air and a bad budget meeting will do it. You'll have to forgive me."

Henderson shuffled his feet. "There's a move in the department to name a comet after you."

Suddenly, Matsui's eyes filled with tears. He was glad the night hid them. "That would be nice, Henderson."

Matsui left Henderson behind, but when the older man reached faculty housing, he didn't stop. He kept going until he came to the bluff that overlooked the sea. Condensation dampened the rail protecting the edge of the low bluff, and it felt cold beneath his hands. Moonlight painted the surf's spray a glowing white. He thought about moonlight on water, about starlight on water. Each wave pounding against the cliff shook the rail, and, for a moment, he felt connected to it all, to the larger story that was mankind on the planet and the planet in the galaxy. It seemed as if he was feeling the universal pulse.

Much later, he returned to his cottage and his books. He was right. Chesnutt replaced him on the committees, but Matsui wasn't unhappy. He remembered his hands on the rail, the moon like a distant searchlight, and the grander story that he was a part of.

Thoughts come slower, it seems, or events have sped ahead, and we want to sleep. Maybe we have spread out, our individual pieces, a long stream of bodies and ship parts, and odds and ends: books, blankets, tools, chairs, freeze dried foods, scraps of paper, the vast collection of miscellany that humanity thought to bring to a distant star. Or maybe the approaching sun has warmed us. The super-cool state that kept consciousness and connection possible is breaking down. But we know we are accelerating, diving deep into the system that gave us birth. It's been a long trip, out and back, the 14,400. Our individual dreams forgotten, but the group one survived: to travel, to find our way out of the cave, to check over the next hilltop. We feel an emotion as the last thoughts fail: something akin to happiness. We're going home.

Captain Fremaria sat on a blanket with her husband on the hill overlooking the launch facility. The lights illuminating the ship had been turned off, but she knew crews were working within the enclosed scaffolding, fueling the engines, running through the last checklists, making sure it would be ready for the dawn liftoff.

"It's just like another test flight, darling," she said to her husband. "I've flown much less reliable crafts." Her heart took a sudden leap as she thought about the mission. She could hear the rockets igniting in her head. Could she do it? The idea of climbing atop the thousands of pounds of propellant had never sounded so foolhardy as it did now. When she was training, the flight remained a theory, an abstraction, but with the ship so close and the schedule coming to its close, she felt like a condemned woman.

"Don't remind me," he said. "I just want to know that you'll be safe. I need a sign."

She sighed. "I wouldn't mind one myself." She did not have to climb aboard the ship. No one could force her to. In fact, she wouldn't really be committed until ignition.

"It's too much history." He moved closer to her so that his hand rested on hers. "Mankind returns to space after all these centuries. Everyone wants to know about the impact of this moment. Will we go to the moon next? Will we go to Mars? What will we find there of the old colonies?" He snorted derisively. "I just want to know that *you* will come back."

Fremaria nodded her head, but he wasn't looking at her. In three hours, she would report to launch central, where they would begin preparing her for insertion into the craft that would carry her into orbit. The mission called for ten circuits around the earth, then a powerless drop back into the atmosphere, where she would fly the stubby-winged ship to a touchdown at Matsui Airbase.

"I won't be that far away. If you could take the train straight up, you'd be there in a couple of hours."

Her husband chuckled, but it sounded forced.

For the first time in weeks, the wind was calm. Fremaria had watched the weather reports anxiously, but it looked as if the launch should take place in perfect conditions. Not a cloud marred the flawless night sky. The horizon line cut a ragged edge out of the inverted bowl of pristine stars.

"I've never seen it so clear," said her husband.

A green light streaked across the sky.

"Make a wish," said Fremaria.

"You know what it is." He squeezed her hand.

Another meteor flamed above them, brighter than the first.

"That's rare," said Fremaria. "So close together."

Before he could reply, a third and fourth appeared, traveling parallel courses.

"It's beautiful," he said.

She arched her back to see the sky better. "There isn't supposed to be a meteor shower now. The Leonids aren't for another month."

A spectacular meteor crossed half the sky before disappearing.

Fremaria leaned into her husband's shoulder for support. For almost two hours, the display continued, often times with multiple meteors visible at once, some so bright that they cast shadows. Then, the intensity dropped, until the sky was quiet again.

"Have you ever seen anything like that?" her husband asked. "Have you even ever *heard* of anything like that?"

"No." She thought about the mysteries of space. "It's a sign."

He laughed. "I guess it might be."

Fremaria glanced at her watch. "It's time for me to go." She brushed her pants after she stood. Her husband held her hand again, but her thoughts now were in the ship. She ran through the takeoff procedure. No mission went without a hitch. They would be depending on her to make corrections, to shake down the craft. A good flight: that was all she wanted, and then a next one and a next one. They began the walk down to the launch facility.

She thought about the centuries. The *Advent* was supposed to go to the stars. Had it made it? No one knew, but they were going again. Her flight would open the door again.

"Are you scared?" her husband asked.

Fremaria paused on the trail. The ship waited for her. She could see that they had cranked part of the scaffolding away from it. Soon it would stand alone, unencumbered. She would sit in the pilot's chair listening to the countdown, prepared to take over from the automated controls if needed. What an experience the rocket's thrust would be! What a joy to feel the weightlessness that awaited her! To break free. To take the first step to the long voyage *out*.

"I'm ready to go."

A single meteor flickered into existence above them. It glowed brilliantly in its last moment. They watched its path until it vanished.

"They don't last too long, do they?" he said.

Fremaria glanced at the ship, then back at the sky. "No, but they travel a long way first." ○

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FOCUS GROUP

Kit Reed

Kit Reed has been writing fiction for over forty years. Both Connie Willis and Lemony Snicket have acknowledged her influence on their own literary careers. Ms. Reed's next novel, *Thinner Than Thou*, which is mostly about food with all that that implies, will be published by Tor in May 2004. Her short stories appear in periodicals ranging from *Asimov's* and *F&SF* to *The Yale Review*.

When I met Billy I had electrodes coming out of my ears and my hair was in rollers, granted there was a nice scarf covering. My eyes looked poached and he loved me anyway! The boy lit up at the sight of me, like we were the last two people standing. Which at that moment was what we were, two giants in a field of waving dwarves.

"I'm Billy," he said. Everybody in the room sighed and creamed but those blue eyes were fixed on me. "I'm here about the . . ."

I fell fast and so hard that I stopped hearing. Billy was standing up there in jeans and the trademark pale blue shirt; he smiled and everything in me went rushing out to meet him. *Lover*.

"Hello, you." He took that blue bandanna out of his butt pocket and wiped the grin off so I could see he was serious. "Yes, you," he said tenderly, "who did you think I meant?"

Me? Within seconds we were bonded.

Billy, with his Billy blue eyes looking into mine; he said, "Baby, I've been waiting all my life for this."

With the pony tail he looked like Young Abe Lincoln, and his big hands opened like he was fixing to cradle your head and kiss your face or split rails for you, whichever you most needed. My only mistake was sharing him with the rest of you, but who knew? *Billy, me too*.

So you have me to thank, all you out there who count on Billy Matson to get you through the days. It was I, Maria, who convinced Carla and the rest that Billy was The One, and not the cowboy in the red shirt. Listen. Without my devotion, Billy Matson would not *be*, at least not on TV in your living rooms, for it was I who hung the jury until I got my way. To

say nothing of the ponytail, I know a trademark when I see one, and thanks to me the producers let him keep it until the ninth season, when it had to come off for certain reasons.

You think life is all natural and like, well—like life, but it isn't. Decisions are made for you while you aren't looking.

You think TV is all about putting something over on you, the public, but it isn't. It's the other way around. The network goes nuts trying to figure out what you want. They need your eyeballs to convince sponsors and to do that they have to keep you locked in front of your TV at certain hours, because money makes television run. The network will do anything you want, and you know what? If you don't want it, they're screwed.

And us? We're the people who tell them what you want because it happens to be what we want, and we wanted it first. Greetings from your focus group.

Every first Thursday the twelve of us ride up to the top of the world and decide. Ten years we've been doing this, and now. Today we have to decide . . . never mind. Until you see the results, you're not supposed to know what we are deciding. You aren't even supposed to know *that* we are deciding.

Why us and not you? It was fate, okay? My girlfriend Carla and I were in the supermarket before dawn that Monday along with Larry and the others, gnawing bagels and feeling fruit as the sun came up on another shitty week. I was in sweats and my hair was still up, I hadn't even done makeup when fate reached into the 74th Street Fairway like the puppet-master pulling us out of a box.

I hissed at Carla, "See those guys? They're *stalking* us."

"Chill," Carla said. "Maybe they want to ask us out."

"The way I look? No way!"

They didn't care how we looked, the network scouts in their tight black jeans and short tight jackets, with headsets and the Filofax with the *Confessions* logo as their bona fides. They said, "Ladies, we have work for you."

"I have to go to work." Okay, I looked so rotten that I lied.

One said, "This *is* work. Serious work. We'll get you time off from your jobs."

The other said, "For the sake of the enterprise," like it was our patriotic duty.

"Come on, Maria," Carla said. "TV!"

"I'm not so sure." My *hair*.

"Affect," they said, "this is your big chance to have affect," like it was a very big deal even though they didn't explain what we were supposed to be affecting. "Sign here."

"I don't know, I . . . okay." It was a close thing, think what I almost missed. And you! Without me to tip the balance they would have cast the cowboy in red instead of Billy and the show would have tanked.

"*Confessions*," Carla said, reading off their Filofax. "What's that?"

"We'll explain later."

"*Confessions*," I said. "Sounds sexy."

They high-fived each other in their cute black gloves. "Yes!"

On our way out of Fairway I yearned toward the Gap. To remind you because it's important to my story, I was having a bad face day, but it was either come as you are or lose your place in line, so I followed them out to the van. They lined us up on the curb and made a speech. "When you got up today you were ordinary people, but now you are special. Congratulations. You get to make decisions for us." Nice pitch. A hundred bucks each for an hour's work. Who wouldn't go for it? To say nothing of network warm-up jackets when the twelve of us got into the van.

Twelve, I thought, just like a jury. Hanging jury, today. But I'll get to today. Right now it's too harsh to think about. If I'd known how it was going to come down, would I have gone with them? Would you?

I nudged Carla, *I don't know*. But she was all, "Oooo, coffee."

"Cappuccinos. We aim to please." Don't ever forget that the networks are desperate to please.

I had misgivings but I got, okay, overwhelmed by the attention—biscotti and doughnut holes, boodle bags with the network logo and take-home Lucite clipboards and pens. *Confessions* baseball caps and nametags waiting for us at the studio, anything to please.

The elevator opened on the penthouse viewing room. It had plush chairs like big fat clouds with carpet and headrests matching, and plush booties to go with. Individual drink trays. There was a mirrored wall in case I forgot how awful I looked. A girl gave steamed face cloths and then, it was weird. We got wired.

They hooked up the electrodes, EEG and EKG to show which parts of the show make our brainwaves spike and what makes our hearts beat faster and then they said, *Hold still* and shot these chips into our arms and I felt warm all over, singing inside, like I was in touch with the universe—what a rush. "What's that?" *Nothing. New technology, hold still*. The lights went down, the chairs tipped back and I looked up between my feet and there he was and something inside me started to buzz.

Billy.

I was in love. He looked right straight at me and smiled. I looked like creamed death on toast and my Billy loved me anyway! He was looking at me like: *Hello gorgeous*. It was like running into Adam at the beginning of the world.

My heart went out and never came back: *Oh you sweet thing, you know who loves you*.

I don't know if it was the chip or what, but I felt it down deep, Billy buzzing, Yes.

If you don't get what I'm saying, you have never truly been in love. The other guys up for the lead in the show? Forget the cowboy in red. Forget the rest. It was Billy all the way.

When the other actors were done the lights were supposed to come up so we could fill out preview cards, but through an accident of fate it stayed dark. Lights popped on behind the mirrored wall and WE SAW THEM STANDING IN THE BOOTH! The booth lit up like a candy box with a bunch of faces like truffles and Billy the chocolate covered cherry in the middle, smiling right at me.

Carla grabbed my arm. "Who's that?"

My heart fell all the way downstairs and I shrieked, "Billy!"

Well, when I yelled the lights in the booth went out fast and they lighted the viewing room. A door opened and all four actors filed out, well, three actors plus my Billy, blinking like, I don't know, guys in a police lineup, followed by three guys in identical power suits carrying morocco clip boards and Mont Blanc pens, and behind them this schlump in a jacket with too many pockets and a T-shirt and chinos that looked like they escaped from a war he hadn't been at.

The other actors were preening or whatever but Billy just smiled: *Me, baby. Just you and me.*

I came up to the edge of those blue eyes and fell right in.

The Armani suit said, "We were going to make this a blind screening, but since we've been seen. . . ."

"Who's that?" I asked Larry, my friend from the produce counter, because this was not his first focus group.

"Those are the actors, stupid, who do you think? The suits are the producers. . . ."

"And the schlub with the beard?" It was disturbing. There I was deep in Billy Matson and this messy little guy was ogling me.

"Nobody, he's just the writer."

"Oh, writers," I said. "Who needs writers anyway?"

In spite of which, the writer guy sidled up and muttered in my ear. "Maria, right? My name is Hal."

"How do you know my . . ."

"You have a wonderful face."

"Me?"

"I can see your thoughts written all over it. You like the script?"

I tried to blow him off. "Like you really care what I think."

"Your opinion means everything." Hal was young back then but working for the network or something had buried his eyes and turned his beard white. His hands were shaking.

Okay, it was flattering. "You really care what I think?"

"The network cares what you think, and listen, if you like my story, your opinion carries a lot of weight."

Oh, I get it. It was transactional. I batted my eyes like I had on my false eyelashes. "That handyman, that Billy character, he needs a bigger part."

"And then you'll vote for me?"

"Head writer. Count on it."

Then the Hugo Boss suit picked up a hand mike. "Okay, friends, we have a lot of decisions to make today. Our assistants have studied your charts and there are a couple of shots too close to call, so we'd like you to stay here until we finalize. It's . . ."

The Armani suit grabbed the mike and cut to the chase. "You might as well know your first job as a group is to cast the show."

I know just what Columbus felt like, landing at Plymouth Rock. Today everybody loves Billy Matson, you write him love letters and send cookies and collect his photographs, but I was the first.

Whatever comes down today remember, I was the first. I found Billy Matson, I fought, bled, and died to bring him to the screen and today I

hold his fate in my hands, well, me plus Hal and the other eleven, so it's a good thing he came to my house after that first show and we got to be friends and became lovers, Billy and me, because the others were only wired at that stage, and I could make or break him; the others gave theirs over but I kept my chip.

"In case you were wondering," the Prada suit said, "the EKG and the EEG are obvious, but the chips measure the X factor." Which was what? Desire? No matter, at the end of that session everybody else lined up to have their chips taken out but I hid behind a door. I don't care about side effects, I don't care if I die from it because I never, ever felt this way before. The chip doesn't just measure, it conducts, now, the others didn't seem to feel it, maybe mine was special. How else did Billy and I bond?

The others went for the cowboy in red but I hung the jury until I got what I wanted and made you want it too and the whole time Billy and I were . . . never mind. I brought you Billy Matson in *Confessions* every weekday at four, walking out of the TV and into your hearts. Next we cast that bitch Carmen; later Hal and I worked out that she would throw Billy over, and she did. I didn't exactly get Billy on the rebound, but he was hurting when she dropped him and it helped.

You are probably wondering how this guy Hal and I got so tight. See, by the end of that first focus group Hal knew who was the power here. I, Maria. It was me. When we were done the Hugo Boss suit thanked us and said the checks would be in the mail and sign here if we wanted to stay on and the chip in my arm was humming, my darling Billy begging me to stay.

Hal asked me out for coffee afterward. I said, "Me?"

He said, "I like your attitude." What he meant was, *You have the power.*

"Are you hitting on me?" I mean, we are talking about a twitchy little creep with no fingernails. Granted I didn't look so good myself that day, even with a nice scarf covering.

"Just keeping my finger on the zeitgeist," Hal said, and slipped his arm around my waist.

It would have gone farther if I'd let it, but I had Billy to think of. "It's the blond pony tail for the lead, right."

"You were unanimous, right?"

Never mind how I finally brought the vote around. "Just making sure."

"Trust me."

I let him nuzzle my neck. "That guy Billy, right?"

"Count on it."

I let him put his nose in my ear. *Better not let Billy see me like this*, I thought, but I did it anyway.

That first season just to thank me, Hal made them let Billy sing. "Maria, I just met a girl named Maria." I died, the ratings went through the roof. They put Billy on the cover of *Soap Opera Digest* and *TV Guide* the very next month, and all because of me.

Oh, we've had our hard parts and our rough patches, what couple in love doesn't? Especially with Billy under so much pressure all the time. I mean, the ratings, the viewer polls. He was gone a lot before the series got its legs, working the fan clubs and doing publicity in malls, but I under-

stood. I ached every minute we were apart, I could feel the chip in my arm singing messages I couldn't make out. And listen. I changed my life for him, I quit my job so I could make it to the focus group and be here for Billy whenever he needs me because where he's concerned I'm the fire in the hearth and when the light goes out, he's dead, so you have me to thank for keeping him before you and Billy, he has me to thank.

My Billy, look at him! His eyes are blue no matter what he was doing the night before and he always has the blue bandanna matching, his hair is brushed and his face smooth and to do this for you he gets up at dawn and rolls into the studio in Jersey at five without fail. He goes to work while you snooze and you bet it is hard for him. You should see him, sweet and fuzzy with sleep, yawning as he rolls out of the company car; he sits in the canvas chair with his name stenciled on whether or not he feels like it, and all for me. Billy goes there and does that every morning in our name, memorizing his sides and turning that sweet head so the camera catches just the right angles, you think that isn't hard? Who wouldn't get a little tired?

It's hard on me too, loving a guy who's in love with his work, but I want you to know that in spite of everything, it's totally been worth it. I've been happier with Billy Matson than I ever was with raunchy Cy Parker or Sid James or Randy Crumb, who wanted children, even before the divorces. And he's been happy with me.

He and I have been through a lot together since that first year, Billy and me—the breakups with Carmen and Tiffany which, frankly, I saw him through, and the long hard spell after his brain surgery when he couldn't do hardly anything for himself and I had to take care of him. I'll explain about how he got the brain tumor later. Suffice it to say that it was me who sat down with Hal and talked it through, it was after the breakup with Marsha which, okay, I'm a jealous lover, which I also engineered. Hal's the head writer and he knows better than anybody that without my approval, he doesn't work so Hal and me, of necessity, we're tight.

It started when the network wanted to fire Hal. He turned to me. They wanted to replace him with this teenaged girl genius who'd sold a script to Quentin Tarantino, "They say she's plugged into the zeitgeist, but hey," he said, and I knew it was a warning, "she might decide Billy's too old, after all, he's almost thirty."

I said, "When's our next focus group?"

"A week from Thursday."

"Leave it to me."

And it was Hal I turned to when Billy got too interested in Marsha, like he was sliding into a totally unhealthy relationship, he was obsessing so bad that I couldn't reach him. I said, "Hal, this Marsha is very bad for him."

Hal said, "I'll see to it."

When Marsha got hit by a truck it was me that helped Billy get over it, he's a sweet boy and he grieves to break your heart. I brought him supper on a tray and we spent long nights cuddling in front of the TV. Incidentally, it was around then that he started seeing double, which was so

scary that I had to bring more food on trays and sit on the sofa and talk him through it, no matter whether it was day and night.

Listen, the boy and I have been through good and bad times together. Weekdays Billy belongs to the people but at the end of the day's trading, the best part of him comes home to me. He is with me every minute in between and I have years of his sweet face on tape in case he ever isn't and I'll spare you the intimate details of our lives. Many's the night we've lost all track of time, snuggling in the dim light from the TV. We are closer than two pages in a centerfold. I hung in while he waited for the diagnosis and the MRI and when they operated I was right there, and in the hospital and after he came home I was at his bedside and believe me, it took weeks to pull him through. Every day I rocked and prayed and put out broth and cake for him, and if you don't think it's too embarrassing, I went down to the church and lit candles for him. You bet he needed me. For a while there, when he tried to renegotiate his contract, it was touch and go.

"It doesn't look good," Hal said, "they think it's gonna metastasize."

"What? The operation was clean. They got it all!"

"He wants twice what he's getting. I think they want to dump him and start with somebody new."

"Don't forget I have my finger on the zeitgeist. Without Billy there isn't any show." My arm was hot and humming. "The chips," I said. "Don't they look at readouts from the chips?"

Hal said, "You mean you didn't have yours pulled out like everybody else?" He was pretending to feel my arm but I knew what he really wanted to feel.

I wriggled close and said, "And Billy. Billy is in touch with the zeitgeist and you know what that means," and just to prove my point I let Hal sleep over, but only on weekends, when Billy isn't here. They called a special meeting. I hung the focus group, like nobody could go home until we came to a single mind, and it was amazing, how fast Billy mended then.

You bet Billy knows who to thank, I am essential to his survival.

And Hal knows it too. Hal is beholden to me and if one hand feeds the other, fine. You might say I'm boffing Hal for Billy. Face it, I am also doing it for you—could you get through one day without him? I can't. Understand, in the world of push and shove, this is how big decisions get made. Sometimes I think I'll go crazy with it, controlling Hal and the focus group, the tension is tremendous and you out there watching in the dark, you don't even know. Sometimes I think even Billy doesn't know.

Of course Billy's been the star for so long that you *Confessions* fans have started taking him for granted, and that's the problem now. It's like you think he is a given, but he isn't, no more than I am for him.

You take what we do for granted too—Hal at his computer, me and the rest of the focus group. At four PM Eastern, rain or shine Billy comes into your home and you think he's all yours for good, but I am here to tell you different.

Danger, everybody. Beware! The network thinks you're over him.

Hal came yesterday to break the news. "Billy's going to Brazil."

"My God, no!"

"I wanted you to be the first to know."

I knew what was coming but I had to ask, "Will he be okay?"

"Brazil, Maria." Hal just shook his head. "You know what that means."

"He can't go to Brazil, he just can't," I said.

"He's looking for his long lost brother Lyle. We just shot the departure."

I buried my face in his chest and nuzzled a little, to warm him up. "Hal, no! People who go to Brazil never come back." God knows this is true. Shows like *Confessions* are shot on sets and they can't afford to build Brazil or take everybody on location although the producers might make a stretch and send somebody down to the docks with a camcorder for the farewell. I mean, you can forget about seeing Billy poling up the Amazon or rescuing Lyle from the Jivaros.

Hal sighed heavily. "I thought I should forewarn you."

It hit like a poison dart. See, for the last couple of months, well, ever since the last contract fight and mostly since the ratings sag, Billy's long lost brother has been emailing from Brazil, where he is working dangerously close to a rain forest where Jivaro Indians run wild with blowpipes and kill people with poison darts so they can shrink their heads for watch fobs. About a month ago the mails stopped coming and Billy freaked. He's been worried to death about Lyle and so have I, Hal and I had him go to the FBI and the CIA in spite of that bitch Vanessa, who told him Lyle was dead and he might as well forget it, probably because she figures the hell with me, his true love, she wants Billy for herself.

"So you see how it is. We're in overtime."

I took Hal by the biceps and begged. "You've got to save him!"

"Frankly, the numbers aren't good." I know, I know, he was trying to break it to me gently.

"Numbers aren't everything."

"In this case they are," hardhearted Hal, popping another Tums. "The show's in trouble and something's gotta go. It's either the star or the script, and I'm counting on you guys to decide that a trip to Brazil will fix everything."

"So what if there's a ratings slump, it's like the stock market, you should never panic and sell short." I ran my hand inside his collar to make my point.

"The show's in big trouble, babe. I've got the February sweeps to pull it out in, and the bosses are screaming for new blood."

"The Hugo Bosses," I said bitterly. "Don't they care what the people want?"

Hal didn't exactly answer. "I don't mind you being in love with two guys at once but I'm afraid push has come to shove. Either I write Billy out, or they bring in a whole new team to do the job." He coughed. "The focus group is supposed to call the shot, so I'm counting on you to . . ."

My arm was getting hot—vibes from the chip, Billy wasn't there just then, but I knew we were in touch. "What if the focus group votes to keep him in?"

"You don't get it, babe. It's either or."

Heaven help me I started to cry. "The network is going over our heads?"

"Oh, hell no." Oh, good grief, Hal's eyes were watering. Miserable peo-

ple, writers, take it from me, don't ever get too close with one. Imagine what it's like for him month after month, torn between the ratings and the producers, the helpless pawn of the focus group, which is to say, the will of the public. He said through his teeth, "We shot two endings and you get to choose."

"Thank God."

"In the other, Vanessa convinces him not to go and we go on like we are." It was getting harder for him to talk. He choked, "You guys are coming in tomorrow. Emergency session. Can I count on you?"

"I'll be there."

I guess he could see betrayal in my eyes. "I just came to forewarn you." He knew as well as I did that as soon as he left I would start working on the others. What neither of us knew was how badly it would go.

I phoned Larry first because this is not his first focus group and I could count on him to help me move things Billy's way.

"Face it," Larry said, "you may like him, but he's getting bald."

"Hair piece! Want to meet for a drink?"

"Billy? I'm over him. Frankly, it's time," Carla said when I phoned. "Face it, Billy's old news, but Hal, Hal has got legs," Carla said. She said, "Did he tell you about his script?" and I knew I was not the only woman Hal was seeing.

This is why my heart is so heavy, riding up to the top of the world to push this big decision through. Even though I'm dressed to the eyebrows and my hair is perfect now, nobody in the elevator will look at me. They're all beady-eyed and furtive now, like right after I hung up, they all sneaked out and decided on their own.

When they come to attach the electrodes I wave them off. "It's a done deal," I said. "Don't bother."

Two hours later, it is over. The Hugo Boss and Armani suits have brought up the lights and they are introducing this black-haired hunk Cyrus, who's supposed to fall in love with Vanessa now that Billy's going away and it seems everybody but me is unanimous about him going away.

"The EKGs say it all, folks. It's time to say goodbye to Billy Matson," they say, "and hello to the new heartbreaker. Now, let's all hear it for *Confessions*, and Cyrus." Funny, when he comes out of the booth and passes among us he spends a little extra time schmoozing Carla, like she and she alone . . . the bitch!

"The bitch," I say to Hal, "I thought she was my friend."

He sighs the deep sigh of a guy who knows he is going to keep his job. "I'm sorry," he says and to prove it is still the same between us he tries to take my hand, but I won't let him. He puts his mouth close to my ear anyway and murmurs, "Can I take you out for coffee after?"

"How can I, when Billy needs me more than ever?" I was craning past him, waiting for Billy to come out of the booth so we can hug.

"Maria, get over it, it's only TV."

"It's my life!"

"It's only a TV show and he's only an actor." He looks up as Billy comes out of the booth. "Right, Bill?"

And Billy, my Billy nods. "Damn straight, and this actor is outta here."

I put my arms out to Billy, "Oh darling, don't give up. . . ."

Billy brushes past like he doesn't even see. He says to Hal, "I'm done with this rotten show. I'm leaving for the coast. Did you hear I'm the sidekick in *Lethal Weapon 8*? I could get, like, a nomination. Best supporting actor, right?" He sounds so happy that I know he is only trying to be brave.

"*Supporting, supporting.*" I know his heart is breaking and I rush toward him with my arms out. "Billy, you're a star!"

And Billy, my love, brushes me aside like a grain moth that is getting between him and his conversation. "Mel Gibson's the cop and I'm his sidekick," he says to Hal, "he's getting so long in the tooth that it's only a matter of time before I play the lead. And listen, I hope you'll keep me in mind if they decide to shoot your script."

His heart is breaking and so is mine. I reach out. "Oh Billy, don't."

"Excuse me," he says, peeling me off like something that got stuck on his shirt.

"Don't go." I can't help myself, I start at shoulder height and slide down, begging. "Billy, Billy, I'll come with you."

He turns to Hal, who is looking agonized, and he says, all by-the-way, "Who's this?"

"You don't know?"

"Not so's you'd notice."

And all the time I am thinking . . . never mind what I think, the grief is too deep and too terrible.

"This is Maria, Maria from the focus group? She's your . . ."

"Biggest fan, don't tell me. Thanks Mary, but I've really gotta go." He pries me off and humiliating as it is, I sink to his feet in a puddle. "Take care," he says to Hal. "If you make it to the Big Orange, I'll take you to Chateau Marmont for drinks."

Billy is so gone.

But Hal is lingering. "Are you all right?"

I can't speak, I just wait for him to go. I want to curl up in a recliner and stay there until they have to sweep me out but the deep place in my arm where the chip sits is hot and burning, humming again with news from *somewhere* so I think all is not lost. I pick up my check and ride down. Outside I shuck my *Confessions* warm-up jacket and baseball hat and shove them in a dumpster before I head across Broadway to get the subway home because I don't have much time to make it before four PM when *Confessions* starts. They are running the new ending today.

I was so tense watching the trial endings that I hardly even noticed this guy Cyrus, that the network put in my Billy's place. The show comes on. He's dark-haired, and bigger than I thought.

"Cyrus," I am trying it out, "Cyrus. You're new around here, aren't you?" And my arm begins to hum.

Baby? Is that you, darling? . . . Babe? O

BIG UGLY MAMA AND THE ZK

Eleanor Arnason

Eleanor Arnason is working on a personal website that will contain information on the 2004 Iceland SF Writing Workshop. Ms. Arnason's most recent fiction has been faring well. "Knapsack Poems" (*Asimov's*, May 2002) was short-listed for the 2002 Tiptree Award, and will be reprinted in the *Year's Best SF 8*. "The Potter of Bones" (*Asimov's*, September 2002) will be appearing in the *Year's Best Science Fiction: Twentieth Annual Collection*.

One day, Big Ugly Mama was walking along, minding her own business, admiring how the galaxy looked spread out around her, the stars shining red, yellow, white, blue, and green.

"Nothing is finer than a well-made, well-run galaxy," she said to no one in particular. "Though that black hole in the middle bothers me sometimes."

But she didn't want to think about the black hole eating away, eating away at all the shoals and fields of lovely stars, so she didn't. She was a woman of character and could regulate her mind.

As she was going along, she noticed a starship in her way. She could tell by the design that it was FTL, but it wasn't doing any FTLing at the moment. Instead it was floating, dark and unpowered, right where she was likely to stub her toe on it.

She bent down and picked it up, turning it in her hands. *Zk* work. She could tell because it had windows. The *Zk* liked windows and put them in all their ships, though there wasn't much to see in FTL travel.

She lifted the ship to one of her big, ugly eyes and peered inside. It was a one-person racer, and she was looking into the single cabin. The emergency power system was on. A few lights shone dimly. The cabin's single seat was occupied by the best-looking male *Zk* she had ever seen. He was in the fifth life-stage, full and glorious maturity. His carapace shone like

bronze; his belly was a delicate shade of yellow; his feathery antennae were azure; and his eight segmented limbs were as brightly red as freshly spilled human blood.

"YO!" Big Ugly Mama said in her booming voice. "ARE YOU ALL RIGHT IN THERE?"

The *Zk* opened his four emerald-green eyes. "No," he warbled. "My FTL engines have failed, and I'm stranded in normal space. This is an especially serious problem, because I'm due home to be crowned king of all the *Zk*."

"HMM," said Big Ugly Mama.

The *Zk* prince climbed out of the pilot's seat and made his way to a window. He wanted to know who was outside. You don't meet a lot of people in a vacuum. All he could see was an eye with a mud-brown iris and a blood-shot white. "Could you step back, so I can see you?" he asked politely.

Big Ugly Mama thought for a moment, then extended her big, strong, ugly arm so that the ship was at arm's length. The *Zk* prince looked out and saw her.

There are two things you need to know in order to understand what followed.

First, the *Zk* are a highly visual species, as might be expected from their four eyes; and the metamorphoses that move them from one life-stage to another are, at least in part, visually triggered. *Zk* scientists believe this reliance on visual cues developed so the *Zk* could synchronize their life-stages with their planet's Long Year. Most likely, the scientists say, the original triggers were sunlight, length of day, changing weather, and the colors of the *Zk* Long Seasons.

Over millennia of civilization, the *Zk* have learned to respond to a wide range of visual stimuli; and the strength of their visual experiences can either speed up or slow down their progress through life. As a result, the *Zk* are careful about what they look at. Their cities, gardens and countryside provide an unending series of calm and pleasant vistas; their art is soothing; and they always prefer the beautiful to the sublime—unless they are planning to go to war. Then they expose their third-stage adolescents to bad weather, savage wildernesses, and disturbing art. This shocks the surly kids into molting; and they emerge as fourth-stage warriors.

Got that?

The second thing you need to know is how *ugly* Big Ugly Mama was. This is not easy to describe. "Plain as a rock" and "ugly as a mud fence" do not begin to convey the right idea. Her ugliness was primeval—like cooling lava on a planet not yet entirely formed, or like broad, empty mud flats on a world where no life has yet emerged from the ocean. It was a fundamental homeliness, full of potential. Imagine her as a mountain of manure—enough to fertilize a hundred thousand gardens and make them flourish, but as yet unused. Along with all this, she looked like a human woman.

Does this help you form an image?

The *Zk* prince got an eyeful, and it was a nasty experience. He shrieked with horror, dropped to the cabin floor, and curled into a ball. The metapores that covered his carapace extruded a shiny, white goo. This spread over his entire surface, rapidly hardening. Within minutes, he was encased in a kind of egg.

"OH DEAR," said Big Ugly Mama in her booming voice. This was her fault. She should have remembered how sensitive the *Zk* were. In her defense, it has to be said that the galaxy is full of intelligent species, all with their individual quirks. It's hard for anyone to remember every little idiosyncrasy.

In any case, she couldn't leave the *Zk* in an unpowered ship in the middle of nowhere, especially in his current vulnerable condition. So she tucked the ship in a pocket and headed for the *Zk* home planet. This was going to be mighty hard to explain. The *Zk* were expecting a handsome fifth-stage prince, not a premature sixth-stage brooder; and they weren't going to be happy. It's hard to crown a person who's covered with spines and wants to be underwater, caring for the next generation.

She walked along and walked along, paying careful attention to where she put her feet. There were a lot of species that didn't know about FTL. Their STL ships whizzed around her ankles. They'd give her a nasty jab if they hit. But none did. After a while, she heard a cracking sound in her shirt pocket. The *Zk* was hatching. She took the ship out and peered inside.

The pseudo-egg lay in pieces on the cabin floor. But instead of the spiny brooder she expected to see, there was a sullen, unattractive grub.

"HOLY TOLEDO!" said Big Ugly Mama, or something to the same effect. The sight of her had driven the *Zk* prince into metamorphosizing *backward*; and he was now a third-stage adolescent.

You may say this is impossible. The arrow of time goes in one direction only. This shows that you don't know much about the galaxy's Mamas, who live by their own rules.

"YO?" said Big Ugly Mama, in a tone of timid inquiry.

"Fuck you," said the grub.

It was still male. She could tell because it had a semen depositor, which was erect. Erotic dreams in the egg, she supposed.

"MIND YOUR TONGUE, YOUNG MAN!" she boomed.

The semen depositor shrank out of sight. The grub cringed and said, "Yes, ma'am."

"DO YOU REMEMBER WHO YOU ARE?"

The grub frowned, thinking. "Glory of the *Zk* Five," he said and glanced at his reflection in the a window.¹ "But I'm not a five!"

"YOU GOT THAT RIGHT," boomed Big Ugly Mama. She found it interesting that he'd kept his memory. Well, the *Zk* kept their memories when they metamorphosized forward. All this told her was the present dilemma was caused by biology, not time travel. Thinking this gave her a wisp of an idea.

"What happened?" cried the grub.

"FIRST OF ALL, PULL YOUR BLINDS." Her booming voice brooked no

¹By now, you are probably wondering why the *Zk* put windows in their space ships, if they are so sensitive to what they see. Very little in interstellar space disturbed them. An exploding star is merely splendid if it has no planets with life. Horror and terror require a human (or *Zk*) context. In addition, all *Zk* windows have blinds.

opposition, even from an adolescent. The grub pulled the blinds, and Big Ugly Mama explained the situation.

"This is your fault!" cried the grub. "You have ruined my life! I'm going to sue!"

"YOU CAN'T SUE A BIG MAMA, ANY MORE THAN YOU CAN SUE A FORCE OF NATURE."

"That's unfair!"

"WOULD YOU PLEASE BE QUIET, SO I CAN THINK? I HAVE THE WISP OF AN IDEA."

There was silence behind the drawn blinds, except for some scuffling and muffled slams. The grub being petulant, Big Ugly Mama supposed. She stood with the ship in one hand, looking at a very nice ring nebula. A dim spark glowed in the center, the remains of what must have been one heck of a star. Her big, ugly brow wrinkled. She thought.

For the most part, Big Ugly Mama avoided time travel. Why go back? You already know what's happened. Why forward? It ruins the surprise. But like all Big Mamas, she could travel in time.

She couldn't think of another way to solve the current problem. It was too risky to try scaring the *Zk* forward to stage five. If the same thing happened again, she'd have a very large big baby (conservation of matter), or something worse.

This was *her* fault. She owed the *Zk* their stage-five prince. She was going to have to take the grub back in time and raise him to full maturity, and she couldn't involve any *Zk* in the process. For one thing, she didn't want to go through the embarrassment of explaining what she'd done. For another, the prince already existed in the past, and involving *Zk*—who might know him and certainly would know about him—could lead to a paradox. Since she had never taken an interest in time travel, she wasn't really sure what caused paradoxes, but she did not want one. They were messy and hard to clean up.

At least the grub could think, after a fashion. She could explain her plan to him and ask for his help.

She did. He groaned and moaned and said, "Fuck it!"

She couldn't blame him for this reaction. Adolescence was awful in every species. No rational being would want to go through it *twice*. Young adulthood could be bad, too, though many enjoyed it.

"IT HAS TO BE," said Big Ugly Mama firmly.

Mumble. Moan. Sigh. "Okay."

She carried him into the past, ship and all. As she was traveling, it occurred to her that she might as well go somewhen interesting, since she was going to be stuck then for twenty human years or so. She liked dinosaurs a lot—all the Big Mamas did—but they'd almost certainly scare the grub. She decided on Earth in the early Carboniferous. Plants had emerged from the ocean and covered the land. That would make the era seem more attractive to a *Zk* than in earlier eras. While animals had followed—or possibly preceded—the plants to land, most of them were comparatively small and unalarming. She thought she remembered that Carboniferous had cockroaches and dragonflies. These shouldn't bother the grub. He had looked a bit like a cockroach in stage five.

The scary creatures were in rivers and the ocean; and the *Zk* were not aquatic, except in their first and sixth stages. They didn't even swim or wade in shallow water, when in a body without gills. Her charge ought to be safe.

She arrived in a forest in the middle of a hot afternoon. The trees tickled her ankles. She downsized a bit, so that she fit in the landscape better. A dragonfly flitted past. Its body was iridescent green, and its half-meter-long wings were transparent.

"VERY NICE," said Big Ugly Mama to herself. She could no longer carry the *Zk* ship in one hand. Instead, she put it over a shoulder and trudged along, her big ugly feet sinking deep into the marshy ground. The air was full of unfamiliar aromas; and the trees she walked among were distinctly odd. One kind had no branches. Instead, its segmented trunk rose straight up, tapering as it rose. Greens tufts grew between the segments.²

Another variety had a trunk that split into a single pair of branches. Each branch ended in a bunch of long, narrow, grass-like leaves that hung down limply, moving slightly in a humid breeze.³ To Big Ugly Mama, both kinds looked tentative, as if the plants in question hadn't yet figured out a good way to be big. There weren't enough branches or enough leaves, and the leaves weren't broad enough or angled properly. How much sunlight does a leaf get, when it hangs straight down? Neither kind would last a year, competing with more modern trees.

A third variety seemed to be doing a better job, having complicated, fern-like leaves; but they grew directly out of the trunk, forming a cluster at the top of the tree. The trunk was covered with diamond-shaped scales. Big Ugly Mama was pretty certain these were scars left when leaves dropped off. The tree must begin its life looking like a true fern. Then, as it grew, the trunk pushed the cluster of leaves higher and higher toward sunlight, till the entire plant was twenty or thirty meters tall.⁴ It was a pretty good solution for how to get light in a forest.

Only the undergrowth plants were familiar to her: true ferns and scouring rushes. These plants had figured out the right way to be their size and had survived.

She squelched along, the ship on her shoulder, trying to put a mental finger on the place's true strangeness. Finally, she got it. The forest was silent. No birds sang, of course; and there weren't the bug and animal noises that a Permian or Jurassic forest would produce. Even the leaves rustled quietly, as if afraid of awaking the future.

"Are we there yet?" asked the grub from behind his blinds.

"YES, THOUGH I'M NOT SURE YOU OUGHT TO RISK LOOKING OUT YET." She glanced at the ground, where something was moving. "HOW DO YOU FEEL ABOUT TWO METER LONG, MULTI-SEGMENTED ANIMALS WITH MANY LEGS?"

"What color are they?"

²*Calamite*, related to modern-day horse tails or scouring rushes.

³*Sigillaria*, related to modern-day club mosses.

⁴*Lepidodendron*, another club moss relative.

"THIS ONE IS BURNT SIENNA."

"Sounds fine to me. The *Zk* keep animals like that as pets."

This *was* the right place, Big Ugly Mama thought. She climbed a long slope out of the forest and stopped on a hilltop. The ground was dry; the plants were low; and she had an excellent view of the forest, stretching east through hazy sunlight. Water gleamed at the horizon: a large lake or the ocean.

"JY SUIS, JY RESTE,"⁵ said Big Ugly Mama and put the *Zk* starship down.

"Can I come out now?" asked the grub.

"JUST A MOMENT," said Big Ugly Mama. She downsized further and hid in a small, unfamiliar plant. "OKAY."

The grub opened the door and stood a moment in sunlight, blinking his four emerald-green eyes. A small myriapod, about ten centimeters long, noticed Big Ugly Mama and decided to eat her. She socked it in the head. Due to the conservation of matter, it was one heck of a punch. The bug fell dead. She felt bad about killing it and a little worried about paradoxes, but the death of a bug in the Carboniferous was not likely to change the future. Time is a lot fuzzier than people think, and tends to be self-correcting over long periods.

Think of each moment as a particle vibrating within a specific range, which overlaps with the ranges of the before and after moments. Every instant we experience consists of *now*, a bit of *now + 1* and a bit of *now of now - 1*. It's this overlap which makes time continuous and enables the individual moments to transmit information from one to another. The information tends to go forward, but there is a slight contrary movement, which is why people sometimes react to things before they happen.

The grub stepped out of the ship and took a deep breath. "It tastes good." He glanced around. "It looks good. But twenty years is a long time."

"DID YOU BRING ANY BOOKS?"

"My ship library has a complete collection of *Zk* classics, none of which I've read."

"THERE YOU ARE. YOU CAN SPEND THE NEXT TWENTY YEARS GETTING AN EDUCATION."

The grub groaned.

This is a short story, so I'm not going to describe the next ten years in detail. Big Ugly Mama built a cabin for herself next to the starship. When the grub was out and about, she stayed inside or hid in a plant. The myriapods continued to bother her, but this problem declined over time. Did they have a way to communicate? Could they learn from the mistakes of others? She didn't know.

The grub spent his days hiking and studying the biology of Earth. A lovely planet, he told Big Ugly Mama, full of wonderful bugs. Often he brought specimens home. Cockroaches were especially numerous and

⁵This is French and means, "I'm here, I'm staying here." Like all Mamas, Big Ugly Mama was self-educated. She had learned a lot in the course of a long life and was especially good at quotes and tag lines, though, she didn't always understand exactly what they meant. In this case, she did know.

varied, ranging in size from teeny tiny to half a meter long. They came in many attractive colors and had many interesting habits. He learned the *Zk* system of scientific naming and named them all.

At night, he pulled his blinds and read *Zk* classics or talked with Big Ugly Mama. She expanded to her full size—which was a wonderful relief; being small gave her cramps—and sat out under the Carboniferous stars, breathing the soft, warm, night air. Above her, meteors blazed into Earth's atmosphere, many brilliant. She didn't worry. This wasn't a period that had mass extinctions.

At the end of ten years, the grub molted into a shiny, grey warrior. For the most part, this was a good change. His moods improved, and he argued less. He became more independent, spending days away in the forest or along the nearby ocean shore. Now he discovered what lived in the water—finding their remains on the ocean beaches and bringing these home: wonderful, shimmery nautaloid shells; shark teeth; trilobite carapaces; and plates from armored fish. Big Ugly Mama told him what she knew about evolution on Earth. He was glad to miss the dinosaurs, though—being a warrior—he was less timid than he'd been as a grub or a prince.

Big Ugly Mama took trips as well. Hers were in time as well as space. It wasn't easy, being stuck in the Age of Plants and Coal with a *Zk* kid.

One day, coming back from a visit to the Cretaceous, she saw something standing by her cabin. It was twice as tall as the cabin and covered with sharp, nasty-looking spines. The moment she laid eyes on it, she knew it didn't belong here and now. She upsized till she was as big as the thing and asked, "WHAT ON EARTH ARE YOU?"

"I'm a Stage Six *Zk* Big Mama," the thing replied. "And not usually found on Earth. The *Zk* crown prince is missing. I tracked him here. A nice place! I've spent some time exploring and watching you. It's always a good idea to look around before acting. Now." She upsized till she was twice as tall as Big Ugly Mama. "What is going on, you nasty-looking thing? Why have you stolen our prince? Why did you bring him here? And why has he gone back to being a warrior?"

Big Ugly Mama upsized as well. They stared at one another, green eyes glaring at mud brown.

Big Ugly Mama had a lot of self-confidence, but she didn't like the look of those spines. So she was the first one to blink. She took a step back to see what would happen. The *Zk* Big Mama stayed put, which meant she was looking for information rather than a fight.

Big Ugly Mama explained what had happened.

"My," said the *Zk* Big Mama when she finished. "What a story! As I said, I've been watching him and you. He seems to be doing well, in spite of being one stage behind himself. Apparently, you have done a good job of raising him through grubhood."

Big Ugly Mama said, "I HAVE GROWN TO LOVE HIM, THOUGH HE WAS VERY TRYING AS A GRUB."

"They all are."

They downsized and sat in front of the cabin, getting to know one another. Night fell. So did a splendid meteor shower. It was sublime, but the *Zk* Big Mama was too tough to molt or form an egg.

They watched the shower in silence till the last red fireball vanished and then were silent for a while longer, considering what they had seen. Finally the *Zk* Big Mama spoke. "The obvious solution is for me to go forward in time and grab the prince shortly before he meets you. But then we'd lose the person he has become due to you. As handsome as he was—or will be—in stage five, he was not an ideal crown prince. Surely you noticed this! He ran off alone in a one-person racer when he was due to be crowned; and he never studied anything except FTL racing. As he was the moment you met him, he boded fair to be an ignorant, self-indulgent monarch. No treat for the *Zk*!"

The *Zk* Big Mama paused, and Big Ugly Mama felt good about helping the *Zk* prince. Maybe it hadn't been a mistake to let him see her. She had brooded over this, though—having a well-regulated mind—she hadn't brooded often or for long.

"I could take him as he is now and carry him forward to the coronation. But he'd be too young to be crowned. No species in its right mind gives power to warriors."

Was that right? Big Ugly Mama wondered.

"I could take him to a point in time ten years or so before the coronation. Then he could grow naturally into a stage-five prince. But there are several problems with this. For one thing, there would be two identical princes in the same time-frame. Which prince would be the true heir? What if they met? Being stage four, both would be feisty. Neither would back down. We'd have a fight and maybe a war."

Would a war over the *Zk* succession be a paradox? Big Ugly Mama wondered. Or merely a royal mess?

"I could try shocking him into stage five. I admit I'm a little worried, due to your experience; but I think that was more you than him. You are really quite amazingly ugly! I'm almost certain I could find something that would frighten him forward into the next stage of his life. Myself, maybe." She smiled, revealing many long, pointed teeth.

This sounded like the best idea so far. Big Ugly Mama said as much.

"It has flaws," the *Zk* Big Mama said. "He will miss ten years of his life."

"HE SPENT TEN YEARS AS A WARRIOR BEFORE HE MET ME."

"Yes; but in a sense, that prince no longer exists, except in the future. We are the products of experience, and the boy we have here has been through many experiences that the former/future prince did not—or has not—or will not have."

Big Ugly Mama remembered why she disliked time travel. It was hell on tenses.

"Why reinvent the wheel or meddle with success?" the *Zk* Mama asked suddenly.

What? thought Big Ugly Mama.

"You raised him through grubhood and were ready to bring him through stage four. His experiences have made him a fine warrior. With your help, he stands a good chance of becoming a fine prince." The *Zk* Big Mama turned stiffly. Apparently her neck and shoulder spines interfered with flexibility. Four green eyes regarded Big Ugly Mama beseechingly. "Would you be willing to stay here with him till he molts?"

Big Ugly Mama looked out across the Carboniferous forest. The sun was a line of fire at the horizon, and the forest was turning from black to green. A few wisps of mist hung above the tree tops. They had talked the whole way through the night. Did she want to stay here and mentor the warrior? She wasn't certain. She needed time to think. "IT'S HIS LIFE. SHOULDN'T WE CONSULT WITH HIM BEFORE MAKING A DECISION?"

The Zk Big Mama considered while scratching a particularly nasty-looking spine. "I suppose it wouldn't hurt to ask. A warrior can think fairly well, except about war. You said it might be several days before he comes back here. I'm going to pay a visit to the ocean. I've been out of water too long. My spines are getting itchy."

"THERE ARE NASTY THINGS IN THE WATER HERE."

"I know that already. I stopped in a river when I arrived. A five-meter-long, carnivorous amphibian tried to eat me. I ate him. Time travel always makes me hungry. Don't worry about me."

It was one thing to kill an myriapod. They weren't in the human line of descent. But an amphibian could be the ancestor of humanity. She pointed this out to the Zk Big Mama.

"Hardly likely. It was too big and specialized. I'll be careful not to step on small tetrapods, if you are worried."

The Zk Big Mama left. Big Ugly Mama sat by herself, looking out over the forest. She had grown to love this era almost as much as she loved the boy. Let her count the ways! She loved the odd-looking trees; the dragonflies; the cockroaches; the life below the ocean surface that she visited from time to time by diving; nautiloids, trilobites, sharks, fields of crinoids like fields of lilies, reefs built by animals that were not corals.

Most of all, she loved the lack of animal sounds. When the wind was right, she could hear large amphibians roaring on the banks of rivers, and the little tetrapods peeped or trilled in their courting seasons, but most of the noise here came from wind, water, and foliage.

As Mamas went, she was relaxed. Why hurry through life, she thought, especially when Big Mamas had long, long lives. Ten years wouldn't make a lot of difference. A pair of courting dragonflies flew past her, their fire-red bodies coupled.

There was sex, of course. It had been a long time since she'd been with a Big Poppa. But that could wait. One thing about Big Poppas. If you wanted sex, they were always available and willing. She'd find one when she was ready.

Several days later, the warrior returned. He was carrying a small, dead shark, and it stank. "I forgot to take a stasis box," he said. "And my journey back took longer than I expected. It's gone a bit off."

"IT'S GONE A LOT OFF," said Big Ugly Mama, who was hiding in a plant.

"It happened so gradually that it didn't bother me much," said the warrior. "One must make sacrifices for science."

"PUT IT IN A STASIS BOX AND COME BACK OUT. I NEED TO TALK WITH YOU."

The warrior did so, and sat down next to the plant. His grey shell

gleamed in the late afternoon light. His eyes were still emerald-green. He had impressive pincers and mandibles.

Big Ugly Mama explained the situation.

"My," said the warrior when she finished. "What a story! I always thought the *Zk* Big Mamas and Poppas were mythological. I should have known better after meeting you, I suppose. But none of the stories described any of the Mamas as looking like a huge human being who's been roughly shaped from excrement."

Big Ugly Mama did not get angry. The description was true; and ugly is as ugly does. Her big, strong heart was beautiful, and most of the time she remembered this, though even Big Mamas have occasional brief moments of doubt. "I'M A VERY SPECIAL HUMAN BIG MAMA," she told the warrior. "MORE *IN POSSE* THAN *IN ESSE*. MY COLLEAGUES, THE OTHER HUMAN BIG MAMAS, ARE MORE *IN ESSE* THAN *IN POSSE*."

"Say what?" asked the warrior.

"THE TERMS ARE FROM LATIN, AN ANCIENT HUMAN LANGUAGE; AND THE IDEAS ARE FROM ARISTOTLE, AN ANCIENT HUMAN THINKER."

"What do the terms mean?" the warrior asked.

"THEY'RE NOT IN YOUR TIME LINE, AND I'M NOT SURE YOU OUGHT TO KNOW—ESPECIALLY HERE AND NOW. WHO KNOWS WHAT HARM MIGHT OCCUR, THROUGH THE INTRODUCTION OF ARISTOTLE INTO THE CARBONIFEROUS?" There was another reason, which Big Ugly Mama didn't mention. She wasn't entirely certain of the meaning of the terms.

The warrior persisted in asking. Finally Big Ugly Mama gave it her best try. "*ESSE* IS BEING. *POSSE* MEANS POSSIBILITY. THE OTHER MOTHERS ARE ABSOLUTELY, COMPLETELY, AND PERFECTLY WHAT THEY ARE. I, ON THE OTHER HAND, AM A POTENTIAL MAMA OR A MAMA OF POTENTIAL. IMAGINE ME TO BE A SEED JUST SPROUTING OR A TADPOLE WITH TWO LEGS. OF COURSE I LOOK A LITTLE PECULIAR! NO MATTER WHEN I GO IN TIME, MY COMPLETE AND PERFECT SELF IS ALWAYS IN A FUTURE I NEVER REACH. I DON'T MIND THIS. TO ME, A JOURNEY IS ALWAYS MORE INTERESTING THAN THE DESTINATION IT AIMS AT; AND A REVOLUTION IS ALWAYS MORE INTERESTING—AND IMPORTANT—AND USEFUL—THAN THE SOCIETY IT DREAMS OF ESTABLISHING."

The warrior looked puzzled, which was hardly surprising, since the *Zk* did not have revolutions. He returned to the previous topic. "I can go home now and be crowned king of all the *Zk*?" he said.

"YES."

"I'll be a handsome prince again?"

"YES."

The warrior considered, frowning. "I'll lose ten years of my life."

"YOU LIVED THEM BEFORE," said Big Ugly Mama.

"But not here. I hated being a grub, but I like being a warrior. I'm brave and resourceful. I won't be, once I become a prince again. This is the

toughest stage of life—except for six, but all I'll care for then is the eggs I guard and the predators that menace them. This is the stage for exploration and self-expression, the stage for science and art and war." The warrior extended an arm and waved a pincher at the hazy forest. "I have an entire planet to explore and describe, not to mention the literature I may write. I've been scribbling poems lately, and I think I may be developing an individual voice."

"I GOT YOU INTO THIS SITUATION," said Big Ugly Mama. "IF YOU WANT TO STAY HERE, I'LL STAY AND KEEP YOU COMPANY."

The warrior was silent for a long time. Finally, he said, "What I'd really like is a cadre of warriors, *Zk* compañeros who share my curiosity and courage."

What was the pang she felt? Relief that he didn't want her to stay with him? Or grief?

"TLL SEE WHAT I CAN DO," said Big Ugly Mama.

The warrior went into his space ship. She stepped out of the plant and upsized till she was taller than a mountain. Clouds floated around her at shoulder-height, but they were widely scattered. She had no trouble seeing all the way to the ocean. The *Zk* Big Mama was there, sitting on the shore and eating a nautiloid with a two meter-long, conical shell. The shell lay next to her, and most of the nautiloid was in her mouth.

Big Ugly Mama dropped down to a reasonable size and took off through the forest of odd-looking trees. Soon she reached the ocean. A strong wind blew. Wild Carboniferous waves rolled in, crashing against one another, and surged up a beach of coarse, black sand. She walked along the beach, keeping an eye open for attractive shells and the carapaces of trilobites. There was something especially appealing about trilobites, though she wasn't certain what. The compact and elegant design of their bodies? Or their large compound eyes? They were the first creatures to take a really good look at life on Earth. That was worth prizing and praising.

At length, she reached the *Zk* Big Mama. The nautiloid was gone except for its shell. The *Zk* Big Mama was examining this. "Very nice. What did the boy say?"

Big Ugly Mama told her.

"Typical of stage four. They are romantic, artistic, and violent. Four is the state for art and war."

"IS IT POSSIBLE FOR HIM TO STAY HERE?"

"Yes."

"ALONE?"

"With *Zk* warrior companions."

"WON'T THAT CREATE A PARADOX?"

"It might, if this were the past of our home planet." The *Zk* Big Mama frowned, which she could do, because the spines on her forehead were small and flexible. "There might be paradoxes if the warriors I bring here gossip after they get home. The knowledge of time travel could change the *Zk* present."

The *Zk* Big Mama extruded a long, narrow, spiny-tipped tongue and licked out the nautiloid shell. Finally, after having gotten every morsel of flesh she could, she spoke again. "Either I will have to pick *Zk* warriors

with very tight mandibles—or I will have to make sure the warriors in question do not return to the future."

"YOU CAN'T LEAVE THEM HERE!" Big Ugly Mama said, thinking of the repercussions of a *Zk* colony in Earth's past. It might not affect *Zk* history, but what if human paleontologists found fossils of bug-like space aliens in Carboniferous strata? It would delight the enemies of Darwin; and Big Ugly Mama liked Darwin. A nice, quiet, thoughtful man.

"I won't," said the *Zk* Big Mama. "Don't worry. This is my problem now. I'll take care of it." She rose and walked into the ocean, moving steadily out until the waves rolled around her, then over her. Then she was gone from sight.

Big Ugly Mama felt faintly dissatisfied. But the *Zk* Big Mama was right. This was a *Zk* problem, not a human one, and she was a human Big Mama. She went home to her cabin.

Some time later, the *Zk* Big Mama returned, bringing a troop ship full of hardy stage four *Zk*. Big Ugly Mama bade farewell to the proto-prince and went forward to the future, which was her present or past. Damn time travel! She could never get her tenses right when doing it. For a while, she kept herself busy, doing one thing or another. But the proto-prince stayed on her mind. She missed him. She even missed him as a grub.

Finally, she went back to Earth in Carboniferous. The prince's racing ship was gone, and there was a note in her cabin, written in the most common human language. The letters were awkward capitals, as if made by someone with stiff, spiny hands.

Your child has moved on. Don't try to find him. At a certain point in time (the early Carboniferous in this case) a boy has to break free of his mother. This is why first stage Zk have razor-sharp baby mandibles. When the time is right, they can gnaw themselves free.

Thanks to you (and me) the coronation will take place when planned. Go then and see it and greet the Zk king, who is (in a sense) your son.

XXX,

The Zk Big Mama

P.S. In case you are wondering, I have moved the boy and his companions to the past of a planet that does not enter into Zk or human history. There are plenty of small animals with exoskeletons and odd-looking trees, so he shouldn't feel homesick for Earth. He can practice his taxonomy on an entirely new ecological system. The planet's night sky is amazing in a way I won't describe, since it might enable you to find the planet. With luck, it will inspire the boy to write good—or at least adequate—poetry. It does a king no harm to write poems and study taxonomy. If done properly, both teach discipline and respect for the universe.

Unlike Earth in the Carboniferous, this planet does have some—though not many—large and dangerous land animals. The boy can test his mettle against these. A king should know something about courage, and it's better to learn courage by hunting than by war. Also, the hunting will help with his taxonomy. He and his warrior companions can hack a settlement out of the wilderness, which will keep them busy—busy pincers are happy pincers!—and teach him how to work with other people.

Poetry, taxonomy, courage, and cooperation! What better lessons can there be for a future king?

By the time he's ready to return to his native time and place, I will have decided what to do about his companions. If I mistrust the tightness of their mandibles, I'll leave them on the planet. There are both males and females in the group. They can form a colony and raise their children in the planet's warm, shallow, almost salt-free oceans. I suspect the colony will evolve through genetic drift and an environment that is different—and less hostile—than the environment of the Zk home planet. Imagine the variation that may develop, without the pruning harshness of the Zk oceans and land! By the time the prince is crowned, they will have become something or many things unrecognizable as Zk.

Whatever happens, the human and Zk time lines won't be disturbed.

XXX again.

Big Ugly Mama read the letter over a second time, then folded it with her big, strong, ugly hands. All's well that ends well, she thought. It was another of her quotes. She was still a little worried about the boy's companions. Leaving them on an alien planet seemed harsh to her. Couldn't the Zk Big Mama find a better solution?

Maybe not, and stage-six Zks were harsh. They had to be, in order to protect their children in the dangerous oceans of the Zk home planet.

Would the warriors evolve into a species without stage six mothers and fathers? On a kinder world, stage six might not be necessary. If so, would new kinds of Big Mamas and Poppas appear, ones without spines and fangs and claws? An interesting idea! She would think about it later, since she had a suspicion it would give her a headache.

Better to think about missing the boy. That was an emotional problem, rather than a problem with the nature of existence; and, unlike most existential problems, it could be solved. She would do what the Zk Big Mama suggested and go forward in time to the coronation. The boy she met then would not be the boy she missed now, but the two were closely related.

That would have to suffice. None of us, not even a Big Mama, can keep someone fixed at the specific stage or moment. The particles that make up time won't allow it. They want to vibrate and transmit information. Heraclitus noticed this a long time ago—or a long time in the future. A difficult man! Big Ugly Mama hadn't liked him. But he knew about stepping in rivers in ancient Greece. Here in the Carboniferous, he would most likely be eaten before he finished stepping in the same river *once*. Who knew what that would do to the history of human thought?

A slight pain appeared behind her eyes. She put the letter in a pocket and downsized herself. The day was bright and mild. Dragonflies flitted and shone around her. A two-meter-long myriapod was crawling slowly past her feet. Its back was as blue and speckled as a robin's egg. A good day to take a walk in the Carboniferous forest and then along a beach, while the wild Carboniferous waves rolled in. With luck, she'd find some good trilobite carapaces! ○

FIRST PRINCIPLES

Edd Vick

Edd Vick is a 2002 graduate of the Clarion Science Fiction Writing Workshop. He has been a baker, a bookseller, and an oilfield worker. Inspired by the daughter he and his wife, SF novelist Amy Thomson, adopted a few years ago, Mr. Vick is currently employed by an international adoption agency. He is also the publisher of a small comic book company, MU Press.

Werner Heisenberg lies abed in his rented flat, fully clothed, and watches the second hand of his pocket watch make its three hundred and fourth revolution. There is a hole in one wall of his room, a small hole. He does not know that it is there. Through it, I watch him, and through it, I now hear his telephone ring.

It is a new kind of device, with mouthpiece and receiver all in one unit, and a button on the base for summoning the operator. He picks it up, and his end of the conversation goes something like this, translated from the original German:

"Heisenberg."

"Yes."

"That was tomorrow, I thought."

He sighs. "I have said this before. DeBroglie was wrong. Uhlenbeck and Goudsmit were wrong. Schrödinger, though better, was wrong. Indeed, I may be wrong. Physics is not—you will pardon my witticism—an exact science. Not yet, at any rate."

He listens for a long time, then cuts in. "Yes, yes, I can understand your impatience. We all age. Time is short for me as well."

"Very well. I will be there."

Heisenberg, sparing one last glance at his watch, rolls himself off of his bed, adjusts the set of his clothes, picks up cane and hat, and leaves. I follow him at a discreet distance. The streets of Heidelberg are narrow hereabouts, thronged with youths newly escaped from the University this evening. When this war Germany has started gains intensity, there will

be no time for them to stroll; they will march. But I have nothing to do with them; my eyes are only for the professor. Looking about the street, he ducks into a beerhouse.

I enter behind him. Waiting for him to settle into a booth, I order from the bar, then find a suitable table from which to watch him. When a woman enters and sits down across from him, I take little note of her, but adjust myself so that I may read his lips. What he says is approximately this:

"Lily! A pleasure to see you again."

"There was someone else I was waiting for."

"No! No, don't go, it is good to see you."

He peers around the room. "I suppose not. The war has interfered with it. The highlight, I would say, was in the twenties. *Then*, there was freedom. *Then*, I could concentrate on my studies. I developed matrix mechanics in 1925, and two years later, my principle of . . . but you do not want to hear about this. The point is—" Finding a beer in front of him, he sips. "The point is, well, it is just that it *is* good to see you. Tell me, what have you been doing the last thirty years?"

He listens, but his eyes are on the move again. They flit past me, moving on. He does not find the person to whom he spoke on the phone.

When he speaks again, it is with the beer again to his mouth. When he pulls it away, I read, "—why we never stayed together. I always felt there was someone, some force, keeping us apart. I could have married you, I could have taught at the University and enjoyed a tenured round of children and parties and hofbraus. But instead I lost you, then I lost myself in my studies."

There is a question. He laughs, then says, "Of course not. We've each gone our own way, and there's no gaining the time back. I enjoy what I do—" Yet he avoids her eyes. "—very much."

A man comes in, not the one he is looking for. Lily waves to him, and they leave for the theater, laughing.

Grabbing up his cane, Heisenberg shoves his way hatless to the door. The crowd parts reluctantly and swallows him up, leaving me inside, helplessly hemmed in with humanity. I pick him up outside, though, and follow him as he stumbles down the street toward the Reichsgarten. Newfound strength careens him from statue to riverside to bench, tapping petulantly at concrete and grass alike. Finally, he finds a seat free of late-night lovers saying their wartime goodbyes, and collapses on it.

He sits for some time facing the statue. Pulling out his watch once more, he sets it beside him on the bench, but doesn't look at it. An hour passes, and the darkness deepens, yet he is sitting in a pool of light under a lamp. Just as I decide he has fallen asleep, or into a deep malaise, he straightens and speaks in a conversational tone. What he says is something like this:

"I know you're there. I've felt you all around me, guiding my work and watching over me. Why? Why pick me?"

He picks up his watch, looks at it. "Am I someone special? Or does everyone feel there are beings out there? Are you . . . angels?"

Jamming the watch back into his pocket, he sits forward, cane between his legs, to blurt, "I don't believe in you. Go away! Leave an old man alone. You know I am to work on this new thing, this bomb. This wonderful terrible bomb designed from my notes. I could have been—but no." He says it with no belief in his voice. "You do not exist. There are only the fundamental forces. No devils, no angels, no gods."

The statue glowers down at him in the darkness.

"Only atoms. Atoms and Fuhrers."

I say nothing. I am nothing if not discreet.

The night lengthens. Heisenberg finally stands, hand to his back, and taps his way back to his lonely room, then to the factories at Rjukan. Choice has left him far behind. ○

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OFF ON A STARSHIP

William Barton

William Barton was born in Boston in 1950. He has been a science fiction writer on and off for thirty years, between stints as an engineering technician and a software developer. A life-long reader of science fiction and adventure stories, Mr. Barton has been dreaming about writing the following story for a long, long time.

A word of warning: There are brief sexual scenes in this story that may be disquieting to some.

It was the best of times. It was the worst of times. Isn't that how it's supposed to go?

It was, oh, I guess the middle of November 1966, that night, maybe seven P.M., dark out, of course, cold and quiet. The sky over Woodbridge, Virginia, was flooded with stars, so many stars the black night, clear and crisp, had a vaguely lit-up quality to it, as if ever so slightly green. Maybe just the lights from the gas stations and little shopping centers lining Route 1, not far away.

I was walking home alone from the Drug Fair in Fisher Shopping Center, up by the highway, where I'd read comic books and eaten two servings of ketchupy French fries, moping by myself. I'd stayed too long, reading all the way through the current *Fantastic Four* so I could put it back and not pay. I was supposed to have been home by six-thirty, so my mom could head out on her date.

Out with some fat construction worker or another, some guy with beery breath and dirty hair, the sort of guy she'd been "seeing" (and I knew what was meant by that), one after another, in the two years since she'd run off my dad, leaving me home alone to look after my two little sisters, ages three and seven.

I remember thinking how pissed off she was going to be.

I was standing on the east rim of Dorvo Valley, looking down into the shadows, thinking about how really dark it was down there, an empty bowl of land, looking mysterious as ever. Murray and I named it that when we'd discovered it three years ago, maybe a half-mile of empty land, cleared of underbrush, surrounded by trees, called it after a place in the book we'd been trying to write back then, *The Venusians*, our an-

swer to Barsoom, though we'd kind of given it up after *Pirates of Venus* came out.

Murray. Prick. That was why I was at Drug Fair alone. There'd been a silence after I called his house, then his mother had said, "I'm sorry, Wal-ly. Murray's gone off with Larry again tonight. I don't know when he'll be home. I'll tell him you called."

I felt hollow, remembering all the times we'd sat together at Drug Fair, reading comics for free, drinking cherry cokes and eating those ketchupy French fries. Remembered last summer, being here in Dorvo, the very last time we'd "played Venus" together, wielding our river-reed swords, lopping the sentient berry clusters from the Contac bushes we called Red Devils, laughing and pretending we'd fallen into a book. Our book.

Murray's dad was the one named them Contac bushes, telling us they were really ephedra, and that's where the stuff in allergy medicines came from.

But then school started, eleventh grade, and we'd met Larry. Larry, who was going steady with Susie. Pretty blonde Susie, who had a chunky girlfriend named Emily, who wore glasses.

Something like this had happened before, when we were maybe ten or eleven, and Murray had joined Little League, telling me it would help him find his way as an "all-around boy." This time, I think, the key word would be pussy, instead of baseball.

I stood silent, looking out across the dark valley, the black silhouette of the woods beyond, above them, the fat golden spire of Our Lady of Angels Catholic Church, floodlit from below, where I'd been forced to go before my parents split up. In the Dorvo Valley mythos, on our wonderfully complete Venus, lost Venus, we'd called it the Temple of Venusia, and the city at its feet, no mere shopping center, but the Dorvo capitol, Angor, port-manteau'd kiddy-French Angel of Gold.

I realized I'd better get going. Through the black woods, down the full length of Greenacre Drive, past Murray's house, where his parents would be sitting, silent before the TV, drinking Pabst Blue Ribbon beer, across the creek, up Staggs Court to my furious, desperately horny Mom.

If I was lucky, she'd spend the night with whoever it was, and I wouldn't have to lay in bed in the dark by myself, listening to their goings-on.

I blew out a long breath, a long wisp of warm condensation flickering like a ghost in the bit of light from the sky full of stars, and stopped, eyes caught by some faint gleam from deep in the valley of the shadow. I felt my heart quicken, caught in a mythopoeic moment. Look, Murray. A cloud skimmer. . . !

Yeah. Right. Where's Murray now? In a dark movie theater somewhere, with his hand groping up a girl's dress, like a real grown-up boy.

But the gleam was there, really there, and, after another moment, I started walking down through the long grass, stumbling over Red Devils and weeds, skirting around holes I could barely see, but remembered from long familiarity with the place, night vision growing keener as I went down in the dark.

Looking toward the phantom gleam, I thought to shade my eyes with one hand, occluding the Golden Angel, cutting off more light from the stars.

Stopped walking.

Thought, um, *no*.

I looked away, blinking like a moron. Looked back.

The flying saucer was a featureless disk, not quite sitting on the ground, maybe sixty feet across. The size of a house, anyway. Not shiny or it would've reflected more starlight. There were things in the deeper shadows underneath it, landing legs maybe, and other shadows, moving shadows, rustling in the brush nearby.

Near me. Something started to squeeze in my chest.

Something else started to tickle between my legs. A need to pee.

I slowly walked the rest of the way down the hill, until I was standing under its rim. The moving shadows in the underbrush were things roughly the size and shape of land crabs, a little bigger maybe, with no claws, though I couldn't make out what was there in their place.

They seemed to be taking hold of the Red Devils, bending them down, pulling off the little berry clusters. What the hell would clawless land crabs want with Contac berries?

Robots. In a comic book, these would be robots.

Anyway, they seemed to be ignoring me.

I felt unreal, the way you feel when you've taken two or three Contac capsules, or maybe drank an entire bottle of Vicks Formula 44 cough syrup.

There was a long, narrow ramp projecting from the underside of the saucer, leading up to an opening in the hull, not dark inside, but lit up very dim indigo, perhaps the gleam I'd seen from the valley's rim. I walked up to it, heart stuttering weirdly, walked up it and went inside.

In movies, flying saucers have ray cannons, and they burn down your city. And in my head, I could hear Murray, jealous Murray, girl on his fingers forgotten, wondering where I'd gotten the fucking nerve.

But I went inside anyway.

It turned out, the thing was like the saucer-starship from *The Day the Earth Stood Still*. There was a curved corridor, one wall solid, the other lattice, wall sloping slightly inward. A little vertical row of lights here, beside something that looked like a door. Around the curve. . . .

I caught my breath, holding stock-still, heart racing up my throat.

Held still and wondered again at finding myself here.

The thing didn't look much like Gort from the movie. Not so featureless. Real joints at elbows, wrists, knees, hips, but there was nothing where it's face should be either, just a silvery shield, a curved pentagonoid roughly the shape of an urban policeman's badge, like the Boston metro badge my Uncle Al wore.

I stood in front of it, looking up. No taller than my dad, so only an inch or two taller than me. Looking up has to be an illusion. It looked a little bit like the robots I used to draw as part of the Starover stories I once tried to write, the ones that filled the background of all those drawings I did, of hero Zoltan Tharkie, policeman Dexteran Kaelenn, and all the odds-and-sods villains they faced together.

I remember Murray and I used to sit together at Drug Fair, tracing pic-

tures from comic books and coloring books, filling in our own details, Tharkie and Kaelenn and the robots, Äendar and Raitearyón from Venus. I remember those two had had girlfriends, and . . .

Stopped myself, shivering.

I reached out and touched the thing.

Cold. Motionless.

My voice sounded rusty, as I whispered, "Klaatu, barada. . . ." Strangled off a fit of giggles with something like a sneeze. Patricia Neal, I remembered, couldn't pronounce the words the same way as Michael Rennie, substituting *Klattu*, *burodda* in her quaint American drawl. Quit it! *Jesus!*

Nothing.

I turned away from the silvery phantasm, maybe nothing more than an empty suit of armor? Slid my fingers along the light panel. Just as in the movie, the door slipped open, and I went on through.

"Ohhhhh. . . !"

I could hardly recognize my own voice, shocky and faint.

There was another corridor beyond the door, and its far wall was transparent, like heavy glass, or maybe Lucite. There was smoky yellow light in the room beyond, lots of water, things like ferns. *Something* in the steamy mist. . . .

I put my nose to the warm glass, bug-eyed, remembering the scene from near the end of *Tom Swift in the Race to the Moon*, maybe my favorite book from the series, where they finally get aboard the robot saucer sent by the Space Friends.

Little dinosaurs. Little tyrannosaurs. Little brontosaurus. Little pteranodons winging through the mist.

"Not quite a brontosaurus," I told myself, voice quiet, but louder than a whisper. "Head's too long and skinny. Not a diplodocus either. Nostrils in the wrong place." There were other things moving back in the mist. Babies, maybe? Hatchlings? Would that be the right word?

I walked on, slowly, going through another door, walking along another hallway. After a while, I began to wonder how they got all this space folded up into a flying saucer little enough to fit in Dorvo Valley.

Another robot, yet another door, and I found myself in a curved room with big windows on the outside. Ob Deck, the voice in my head called it, pulling another word from another book, as I pressed to the glass, cold glass this time, looking out on greenish night.

Dorvo Valley. Little land crab robots. Brilliant green light flooding up from the ground beyond the forest. Something odd. It isn't that bright outside. Can't be much more than eight P.M.

Little frozen image of my mother.

How long before she calls the police?

Thought dismissed.

What should I do?

Get out of here! Run home. Call the cops yourself.

I pictured that. Pictured them laughing at me as they hung up, as I turned to face my raging mother. You little bastard! she would say. Bob didn't even *wait* for me.

Pictured that other scenario. The cops come, we go to Dorvo Valley.

Nothing, not even a circle of crushed vegetation. And, either way, I go to school in the morning. Word would get out, one way or another.

The lights flickered suddenly, and a soft female voice said, "Rathan adun dahad, shai unkahan amaranalei." More flickers. Outside, I could see the little land crabs were making their way downhill, dragging their loads of harvested Red Devils.

Cold clamp in my bowels.

I turned and ran, through the door, down one corridor, through the next door, up another, around a curve, back through. . . . Ob Deck! Turned back, found myself facing a faceless robot. Still motionless. Started to whimper, "Please. . . ." There was a rumbling whine from somewhere down below, spaceship's structure shivering. The lights flickered again, the lady's voice murmuring, "Ameoglath orris temthuil ag lat eotaeo." More flicker. Something started to whine, far, far away, like the singsong moan of a Mannschenn drive.

I felt my rectum turn watery on me, clenched hard to stop from shitting myself, and snarled, "That's just a fucking story! Think! Do something, you friggin' idiot!" As if my father's words could help me now.

I turned and looked out the window, just in time to see the ground under the saucer drop away. Suddenly, surrounding the dark woods, the map of Marumscio Village was picked out in streetlights. There was Greenacre Drive, where Murray's parents would be finishing up their beer. Beyond the dark strip of the creek, halfway up Staggs Court, had to be the porch light of my house, where, by now, my mom would be about ready to kill me.

It shrank to a splatter of light, surrounded by the rest of Woodbridge, little Occoquan off that way. I squashed my face to the glass, looking north, and was elated to see, from twenty-two miles away, you could still make out the lights of the Pentagon, could see the floodlit shape of the Capitol Dome, the yellowish spike of the Washington Monument.

City lights everywhere I looked. Speckles and sparks and rivers of light, brighter and more numerous than the stars in the sky. I'd never flown on a plane at night before. I'd never . . .

I felt my face grow cool.

Watched the landscape shrink.

Suddenly, light appeared in the west, like sunrise.

No! I'm high enough up the sun is shining from where it's still daytime!

Turned toward the blue. On the horizon, the curved horizon, there was a band of blue, above it only black, sunlight washing away the stars.

Curved?

Bolt of realization.

I can see the curvature of the Earth. That means . . . I shivered again. And then I wondered, briefly, if Buzz Aldrin and Jim Lovell were somewhere nearby, peering out through the tiny rendezvous windows of Gemini XII, watching my flying saucer rise.

Whole Earth bulging up below now, looking for a moment like the pictures sent down from Gemini XI, which had gone all the way up to an 850 mile apogee. It turned to a gibbous blue world, getting smaller, then smaller still.

Something flashed by, huge and yellow-gray.

Moon! It's the *Moon*!

How fast?

That was no more than a five minute trip.

I tried to do the calculation in my head; couldn't quite manage. I'd never been any good at math. A lot slower than the speed of light, anyway.

I remembered the final scene from "Invaders from Mars," where the little boy wakes up from his dream, and felt a cold hand on my heart. If I wake up now and it's time for school, why don't I just kill myself and get it over with?

But the ship flew on into the black and starry sky, and I realized, after my moment of inattention, I could no longer find the Earth or Moon. Where am I going?

And why?

I awoke from a dreamless sleep, and opened my eyes slowly, lying on my side, cramped and cold, against the curved Ob Deck bulkhead, staring at the motionless gort by the door. Whispered, "Gort. Merenga." Nothing.

I always wake up like that, always knowing where I am, never confused. Maybe because there's that little re-entry period, those few seconds between waking up and opening my eyes, when I remember where I was when I went to sleep, so I know where I'll be when I awaken.

I pushed myself to a sitting position, back to the wall, something in the back of my neck making a little gurgle as I stretched, like my spine was knuckles wanting to crack.

Seemed more real, now that I'd been asleep, putting a bracket around the night before. I was here. Period. Unlike the hazy wonder of the dream where we flew past Jupiter, some time around midnight. It'd been a fat, slightly flattened orange ball, not at all the way I would've expected.

Three hours, I remember thinking. That's fast. What, fifty thousand miles a second? More? We went by something that looked like a ball of pink twine, and that's when I discovered if I put my finger against the window glass and circled something, it'd get bigger, that another tap would make it small.

I'd picked out five little crescents. Circled and tapped. Figured out the red potato must be Amalthea, the pink ball Europa. Maybe the scabby yellow one was Io? Those other two, two similar-looking gray cratered bodies, looking pretty much like the Moon, those would be Ganymede and Callisto, but I couldn't figure out which was which.

Murray would know. Murray out at night in the summertime, pointing at this star and that one, naming names, mythological and scientific, every kid in the neighborhood but me impressed as all hell. Once, I'd caught him in a mistake.

And he'd said, "I don't know if I want you for a friend anymore."

After that, I kept my mouth shut.

The lights flickered and the woman's soft voice said, "La grineao druai lek aporra. . . ." Trailing off, like she had something else to say, but couldn't quite get it out.

I stood, turned and looked out the window.

It was like a featureless yellow ball, hazy maybe, circled by a striated yellow-white ring, grooved like a 45rpm record. Colored like those records I'd had as a child, like the one with "Willie the Whistling Giraffe." I'd loved that song, and listened to it so much I could still sing all the words. I was startled to find out, years later, it was written by Rube Goldberg.

Saturn was growing in the window, growing slowly and . . . I realized it should already be going past, shrinking away. "We're slowing down." I glanced at the robot, as if looking for confirmation.

Nothing.

When I looked back, a smoky red ball was in the window, starting to slide past. It stopped and stabilized when I circled it with a quick fingertip, movement transferring to the sky beyond, Saturn starting a slow slide across the fixed stars.

"Titan."

Nothing.

"God damn it, *Titan!*"

Like I wanted something from myself then. But all I could do was remember, remember Captain Norden from *The Sands of Mars* reminiscing about the cold, howling winds of Titan, remember Tuck and Davey from *Trouble on Titan* and their homebuilt oxygen-jet, flying the methane skies.

What would I remember about all this, years from now?

I had a glimpse of the man I might have become, some fat guy in a crumpled suit, selling who-knows-what. All the men on Staggs Court. All the men in America in 1966.

The woman's voice said, ". . . kag at vrekanai seo ke egga." The lights flickered again, like punctuation. I tapped Titan to release the image and pressed my nose to the glass.

Ought to feel colder than this. Saturn's pretty far from the sun.

There. A spark of pale yellow light.

It grew swiftly, filling the window without interference from me, gliding to a stop just outside. It was a cylinder of gray rock, things visible on its surface, structures, and I could see it was revolving slowly around its long axis.

Revolving so there'd be artificial gravity inside, centrifugal force. It'll be hollow, I thought. Maybe this was what Isaac Asimov had termed a "spome," short for "space home," in some *F&SF* column or another? No, that's not right. Where the hell . . . Asimov's article was in that book my dad brought home, Kammermeyer something . . . "There's No Place Like Spome"? Dad had gone to a meeting of the American Chemical Society a year or two earlier, had come home snickering about the little fat man with what he'd term "a thick New York Yid accent."

I remembered him saying, "*Asimov?* Now I see him in a *different* light!" When I was little, we'd lived in a neighborhood full of Russian Jews, somewhere in Boston, Brookline maybe, and he'd done a good job of picking up the accents, and those special cadences. It'd become the basis for some family in-jokes.

The thing rotated toward us, though it had to be my flying saucer flying

around I guess, then a four-mandibled parrot's beak opened, spilling bright yellow light, and we flew right in.

Flew right in, swooped over green landscape, found a flat white field, concrete I figured, and slotted in to a landing, one of the few vacant spaces in a parking lot full of flying saucers just like mine.

A flicker of lights.

A womanly voice, full of warmth and welcome, "Todos passageiros sai. . . ." Then the saucer groaned and shivered as the boarding ramp slid down. It only took me a minute to realize that if I could find a land crab, I could follow it down to the hatch; maybe fifteen minutes after that, I was standing outside.

There was a cool breeze blowing across the concrete apron, and it smelled sweet here, making my nose itch. Alien pollen? I'm allergic to a lot of stuff. I whispered, "What if I get sick?" My voice sounded funny, here in the silence. I shouted, "Hello-oh?"

Not even an echo, my voice carried away to nowhere by the breeze. "Anybody. . . ." Of course not. I started forward, walking between two other saucers, stopped suddenly, feeling a cold knot in my guts, looking back toward my saucer, realizing how easy it would be to get lost here.

Does it matter?

How would I know if my saucer is ever going back to Earth?

From where I stood, I could see beyond the last row of saucers. There was a tall chain link fence, topped by razor wire; beyond it, a dark green forest.

Nothing moving.

No dinosaurs, big or little, in the woods, no pteranodons in the sky.

Sky? Well, not exactly.

Overhead, the main thing was a long yellow stick of bright light. In a story, that'd be a fusion tube or something, an "inner sun" for this long, skinny ersatz Pellucidar. Beyond, to the left and right, were two green bands, the same color as the forest. Between them were three more bands of black.

In one of them, you could see Saturn, its brightly backlit rings looking like ears, or maybe jug handles. And that bright star? That'd be the sun I guess. Glass? So how come I didn't notice any windows from the outside? How come it just looked like rock?

My memory started picking through stories, right then and there.

Something moved in the distance. I looked, and felt cold when I saw what it was. One of those brontosaurus-things, full size I think, but with a too-skinny head, snaky neck dipping so it could browse among the tree-tops. Glad for the razor wire. Cold but elated. As if. . . As if!

There was a deep bass thrumming noise, almost like a long, low burp. The bronto looked up. The inner sun suddenly brightened, filling the landscape with a violet dazzle.

I blinked hard, eyes watering, looked up again and realized that Saturn was gone, that I felt something else in my guts, a pulling and twisting. Dizzy. I'm dizzy. Like the ship is maneuvering violently, and I just can't see it because there's nothing to see.

Then there was a great big ripping sound.

A white zigzag crack appeared in the windows, going from one to the other, as if it were a rip in the sky itself, though my mind served up an image of what it would be like as the glass blew out and the air roared away to space, carrying off forest and trees, brontos, flying saucers, Wally and all.

The crack opened like white lips, revealing a blue velvet throat beyond, into which, somehow, the ship seemed to plunge, then the fusion tube dimmed, back to yellow again, back to being a soft inner sun, all the odd twisting and pulling stopped, and there was only the soft breeze.

In a story, I thought, we'd be going faster than light now.

And then I said, "Damn! This is the coolest thing that ever happened to anyone! Murray would be so fucking jealous!"

Yeah, right. I could almost see his bemused, angry smirk, fading into the blue velvet hypersky as he turned away, forgetting about me, about Venus, about all the things we'd done together, all the dreams we'd had.

On Earth, in only a little while, people would stop wondering what'd become of me, and go on with their lives.

Some days later, I couldn't tell you how many days, already a good bit skinnier than I was the night I'd decided to cut through Dorvo Valley on my way home from Drug Fair, I sat beside a little deadwood campfire on the concrete apron beside my trusty flying saucer, roasting up a few fresh breadfruit for supper.

Mangosteen! That, I'd remembered, was from a kiddie book I'd found in my grandfather's attic, when we went up for the funeral, four, five years before, *The Hurricane Kids in the Lost Islands*. I'd been looking for the sequel ever since, where Lebeck and DuBois send their boys off to the Land of the Cave Dwellers.

Breadfruit? Probably not. Probably no breadfruit back in the Jurassic.

Sudden image of myself finding the little gate, sneaking out into the edge of the Big Woods, finding all sorts of stuff. Nuts mainly, and these things. Ferns. A tree I recognized had to be a gingko. Little lizards, maybe skinks, anoles, some kind of snake.

I fished one of the breadfruits out of the fire with a stick, held it down and cut it open with another stick I'd managed to break off at an angle and sharpen by rubbing on the pavement. It had mealy yellow-white flesh inside, like badly overcooked baked potato, steamy now, odorless, smelling just the way it would taste when it cooled enough to eat.

This is the last of them. Tomorrow I'll have to go out again and . . . I felt a little sick. Last time, blundering around in the woods, picking nuts and berries and whatnot, there'd been that soft rumble, I'd looked up, and suddenly wet my pants.

The allosaurus didn't even notice, didn't look up as I'd crept away, back through the gate, closing it carefully behind me. I'd cooked and eaten, silent with myself, sitting bareass while my underpants and jeans dried by the fire, draped over my constant companion.

I looked at it now, little humanoid robot, two feet tall, looking just like a toy from Sears I'd had when I was eight or nine, electric igniter in one hand, fire extinguisher in the other. It'd come toddling up just as I'd burst

into tears beside my pitiful pile of dry sticks, just as I'd screamed, "Fuck it!" and thrown my pathetic attempt at a fire drill as hard as I could at the nearest flying saucer hull.

I said, "What d'you think, Bud? Why's this starship got a Jurassic biome inside?"

Silence.

"Yeah. Me too."

I picked up the now merely hot breadfruit and scooped out some tasteless muck with my upper front teeth. "Mmmmm . . ." blech. Even butter, pepper, and sour cream wouldn't've helped. Not much, anyway.

"What d'you think, Buddy? Thanksgiving yet?" Probably not. It hasn't even been a week. But I pictured my little sisters, Millie and Bonnie, sitting down to turkey dinner with Mom. Bonnie probably misses me. Millie was probably glad just to get my share.

Christmas. I wondered what Dad would get me? I'd asked for a copy of *Russian in a Nutshell*. Two years. Then what? No college for me. Bad grades and no money.

Vietnam?

Maybe. Some of my friends' older brothers had gone. At least one boy who'd picked on me when I was little was dead now. I remembered reading an article in the *Post* a while back, about how so many good American boys were being corrupted by little brown Asian prostitutes, which made me think about *Glory Road*.

Murray and I had talked about that the next day, and he'd given me a funny look, kind of a sneer, before changing the subject. Remember when we debated Vietnam in eighth-grade Social Studies class? I'd said I wasn't worried. It'll be all over, long before I turn draft age, toward the end of 1969. Yep. All over.

And, just like that, there was a deep bass thrum, like a gong gone wrong. When I looked up, the blue velvet sky was broken by a long white crack, white lips opening, spitting us out into a sky full of stars.

I got up, throwing the half-eaten breadfruit aside, running for the flying saucer's ramp. Behind me, I could hear the sharp, fizzy hiss of my little buddy's fire extinguisher, as it sprayed away the flames.

Down on the yellow-gray world, I crouched in the shade of the flying saucer's hull, looking out toward the horizon, across a flattish landscape floodlit from above under a pale, blue-white sky. I'd run off the bottom of the ramp when we landed, had run right out there, bounding high, realizing the surface gravity of this place was maybe no more than half that of Earth.

But then the light from the vivid spark of a tiny blue sun had turned to pins and needles in my November-white skin, forcing me back into the shade. My face, when I touched it, was already starting to peel.

Jesus. Stupid.

And what if? What if a lot of things. What if the air here had been deadly poison? What if there's some disease here a human being could catch? What if I'm already dead and merely waiting to fall down?

Yeah, yeah, I know. The guy in the story never dies. Except the one in

that Faulkner story the teacher made fun of, when we studied it in tenth grade English Lit class. What're we supposed to imagine? she'd said. He's carrying paper and pen, taking notes as he jumps in the river and drowns?

From space, the planet had looked like a yellow-gray ball, almost featureless. Oh, there was a tiny white ice cap at the visible pole. A few pale clouds near what looked like some isolated mountain peaks. A canyon here, a dune-field there. Mars without the rust?

Arrakis, I thought. I'd enjoyed the five-part serial in *Analog*, though I was mighty pissed off about the stupid format changes Campbell was playing with, going from digest to some standard magazine size, then back again, fucking up my collection. I remember I wondered if the Dune world had started out as Mars, if maybe Herbert realized at some point that the solar system was too small for the story.

I thought about my bedroom. My bed. The little desk. Bookcases full of children's hardcovers, the stuff from Grandpa's attic, the paperbacks and magazines I was buying down at Drug Fair, *Amazing* and *Fantastic*, *Worlds of If*. . . .

Out in the sun, the land crabs had buckets and little self-propelled wheelbarrow things, were shoveling up patches of mauve sand. Melange? Whatever it was, it went no more than a few centimeters deep. I sniffed, but couldn't smell anything like cinnamon. Whatever this place was, it mainly smelled like fireworks. Gunpowder. It smells like gunpowder.

From the Ob Deck, I'd been able to see something that looked like a city, way off on the horizon, low white buildings, dazzling in the sun. A circle of my fingertip had brought them close. Adobe? No sign of movement, some of the buildings looking weathered and worn, the ruins of Koraad perhaps.

Miles off, anyway. I could wait 'til nightfall, and it'd take maybe three or four hours to get there, tops. Yeah? And what if the starship leaves without you? What then? I thought about *Galactic Derelict* suddenly. No. I never wanted to be one of Andre Norton's dickless boys. Let's have a Heinlein adventure, at least.

Or maybe I can grow up to be John Grimes after all? Is there a beautiful spy somewhere waiting for me? Jesus. Grow up. At this rate, I'll be lucky to last another week!

What if this was a Larry Niven story? What if we land on a planet that has a habitable *point*? I pictured myself running down the ramp, out onto the sand. Then the deadly winds of We Made It would come up and there I'd be, on my way to fucking Oz.

After a bit, I turned and went on up the ramp. Look out the window. Watch the baby dinosaurs or something. One thing you know: The saucer will leave, the starship will fly, and, sooner or later, we'll be somewhere else. And another thing: Who owns all this shit? The robots? Not bloody likely, cobber. Maybe this thing is like some super-sophisticated Mariner probe. And, sooner or later, it'll take its samples on home.

What happens when they find *me* in the collection bag?

Watching the land crabs gather up Spice, I suddenly wished for . . .

something. Anything. Wished I'd see a sandworm in the distance. Wished for Paul Atreides to come riding up? No. Chani, maybe?

I'm guessing it was maybe three weeks before we made the next land-fall—no, planetfall's the right word—three weeks in which I got *really* sick of plain breadfruit. Somewhere along the way, I got up the nerve to cook and eat a few little lizards, which turned out to be mainly bones, and salty as kippered herring snacks, finally moving on to a two-foot brown snake I'd caught.

Didn't taste like chicken, more like fish I guess, but the oily juice that cooked out of it made the breadfruit taste okay.

The next planet was . . . what'd we used to say in junior high? Cool as a moose. I crept down the ramp, uselessly cautious, and stood there with my mouth hanging open. What can I say? Earthlike but alien?

The spaceport, if that's what it was, was just a plain concrete apron, not much bigger than the helicopter pad next to the Pentagon, sitting next to what looked like a walled city. Not a medieval city, not an ancient Roman city. The walls were plain and unadorned, no crenellations, no battlements, no towers. White concrete walls, pierced by a few open gates on the side I could see. Egyptian Memphis, I remembered, had been called something like *Ineb-Hed* by the natives. White Walls.

The buildings I could see over the wall were low and white and square.

Overhead, the sky was dark green, green as paint, with little brown clouds floating here and there. The sun, if sun it was, was a dim red ball, halfway up the sky, banded like Jupiter, with mottled splotches here and there. Sunspots? Starspots? Maybe it's a planet, and that's reflected light.

Away from the city, the land was all low forest, things not much like trees, grayish, bluish, a reddish-purple that I realized with a flush of pleasure might be the heliotrope of Amtor. Things moving in the shadows, inside the forest. Pod-shaped things. Plants with lips.

The land crab robots were coming out of the saucer now, forming up by rank and file, so when they set off, heading for the nearest city gate, I walked along beside. What the hell? If they start to leave, I'll follow them back. Safe enough.

It was gloomy in the city, a city full of gray-green shadows. Gloomy and motionless, reminding me of the scene where Gahan of Gathol walks into a seemingly deserted Manator. Sure. And the land crabbots'd make pretty good Kaldanes?

That filled up my head with long-running images of Ghek, crawling through the Ulsio warrens of Manator.

I looked in an open doorway, yelped, tripped over my own feet, and wound up on my knees, staring, heart pounding. Jesus Christ! Well, at least it wasn't moving.

The thing, when I got close to it, was about three feet tall, looking like it was made of black leather. There were staring black leather eyes. Black leather fangs. Black leather hands shaped like a three-fingered mechanical grab.

I touched it, wondering what the hell I'd do if it woke up and turned out to really be a thrint. Fuck. I'd do whatever it wanted, I guess, and that

would be that. It didn't budge, no matter how hard I pushed, nor did it have a bit of give to it. Cold black metal, glued to the ground.

Statue, maybe? Or just another switched-off robot?

What the hell is going on here?

Where *is* everyone?

Back out on the street, the land crabs were gone. Okay. Look around a bit more, then get the hell on back to the saucer. I went on up the street to the end, where it came to some kind of octagonal plaza. There was something that looked like an empty fountain in the middle, beyond it a domed building made mostly of glass, lots of tempting shadows inside.

The glass doors, when I tried them, swung right open, so I went on in.

Inside it was all broad aisles, floor carpeted in a patterned nappy monochrome the same color as the sky, and lining the aisles were . . . I don't know. Exhibits? Things like pictures anyway. Dioramas. Blocks of stuff like glass or Lucite, with motionless objects inside. Animals, I think. Some things that could only have been machines. Things that were clearly paintings of the "thrintun," looking like they were walking around the city, doing whatever.

So are those the aliens? Are they all in some kind of stasis? Suspended animation?

I suddenly found myself wishing there'd been more variability in the stories I'd been reading since I learned how to read. But the stories had been pretty much self-similar, as though the writers, without any source of new ideas, could only copy each other, over and over again.

In the middle of the building, taking up a big space under the dome, was a flat, tilted spiral shape, made of what looked like metallic dust, hanging motionless in the air. Like the Andromeda galaxy, blue and red and white and . . . my mouth went dry. Star map!

I walked round and round the thing, peering inside, trying to recognize something, anything, but it looked like every spiral galaxy illustration I'd ever seen. All of them. Or none. For all I knew, it could be NGC 7006 and here I was, beyond the farthest star.

On the other side of the spiral was an aisle lined with things that looked like model spaceships. Some of them looked pretty much like what humans were building, back on Earth. Look here. It's a couple of thrintun sitting in a sort of Gemini capsule. Not quite, but close. And this? A thrint climbing down on the dusty surface of some moon or another?

The ships got more and more advanced, until I suddenly wondered where the flying saucers were. Ah. Right here. Right at the end. Here's a flying saucer, surrounded by thrintun with things like guns, surrounded by thrintish tanks and cannons . . . surely, standing on the rim of the saucer, I'd see one of my familiar gorts?

On the ground under the rim of the saucer were models of about two dozen creatures, every one of them different.

Yep. That'd be the thrintun being welcomed to the Galactic Federation, right? Pleased at how clever I was, I started walking back toward the useless star map. Hey, if I'm lucky, it's *my* galaxy, and I'm not so far from home after all. Right. What the fuck am I going to do, *walk* back to Earth?

I stopped by the model of the moon lander. Maybe that was their moon?

It was a pretty primitive spaceship, looking a lot like the earliest designs of the Apollo lunar excursion module. Moon. I tipped my head back, trying to look out through the dome, wondering if I'd spot a crescent somewhere in the dark green sky.

Very dark green sky.

Felt my mouth go drier than I would've thought possible. No sun, though I could see a flush of red in the sky, off to one side. So how the fuck long have I been in here, anyway?

I walked back up the aisle, around the spiral galaxy, back down the other aisle and out the door. Despite the fact that it was starting to get a little cool out, I felt myself start to sweat, armpits suddenly growing spongy and damp. Well. Started to walk back the way I thought would lead to the spaceport. Just get outside the walls. You'll find it.

I started to run, making little gagging sounds, throat suddenly sore, feeling like I was going to start crying, like a little kid lost in a supermarket.

And my little flying saucer popped up above the walls right in front of me, hung there for just a second, then dwindled away into the dark green sky and was gone.

I stood there, looking up, feeling the hot tears start down my cheeks, vision blurring, and whispered, "I always do something stupid, don't I? Just like Daddy says." I rubbed the tears from my eyes, suddenly angry, and thought, There you go, champ. Murray'll be so fucking jealous now, won't he?

I awoke, opening my eyes on a flood of vermilion sunshine coming in through the window, falling on me like a spotlight, and wished, just this once, I could be one of those people who wake up confused, not knowing where they are. I couldn't really remember the dream, something about school, I think, and had a nice hard-on, probably nothing to do with any images I'd seen in my sleep.

Christ. Mouth so fucking dry.

I rolled over on my side, feeling dizzy, headachy, hungry, looking around the room. The wall-to-wall carpet I'd slept on was pale gray, softer and fuzzier than the stuff in my parents' house. Mom's house, nowadays. Dark green walls, with brown trim. Stuff like furniture, odd-shaped couches and chairs and little tables I was kind of afraid to touch, for no reason I could put my finger on.

Stories. Too many stories. What if.

I'd wandered around for a while as it'd gotten darker, wondering what the fuck I was going to do, watching the sky fill up with unfamiliar stars. Finally knelt and drank some water from the gutter. Bitter metallic stuff, tasting way worse than the water in Marumsc Creek. And I'd gotten sick as a dog the last time I'd drunk from the creek, coming down with a high fever that resolved into tonsillitis, resulting in a shot and some pills and five days of missed school.

I remembered Murray looking at me with bemused contempt. How come you're sick all the time, Wally?

I don't know.

After a while, in the dark, it started to rain, hot stuff that scalded in my eyes, burned on my scalp, making me run for the nearest shelter, which happened to be something like a porch, on something like a house, in something like a suburban neighborhood. No, not suburban. Small town. Like the neighborhoods in 1930s movies. Judy Garland and Mickey Rooney. When I tried the door, it'd opened, and I'd gone in, sat down in the middle of the floor, just sat there in the dark, listening to the rain, wondering if they had thunder and lightning here.

I got up, feeling stiff and tired, rubbing my empty stomach. Almost flat now. At this rate, I'd soon be as skinny as when I was a little kid. I'd always wanted that. What had made me get fat anyway? Starting to hang around with Murray and eat whatever and whenever he ate? I remember Mom was glad when I stopped being so thin.

There was a little room off what I thought of as the parlor, small, windowless, airless, and in the light of day I could see there was something like a stone sink, beside a little hole in the floor. Maybe the thrintun couldn't sit down and just squatted over the hole? No, wait. Thrintun regurgitate their waste, so they'd lean over the hole and . . .

I felt my intestines cramp. So now I've got to shit. Great.

One step forward and I stopped, sweat beading on my brow, asshole clenching. I was *afraid* to squat over the hole. What if I slipped and fell in and couldn't get out? What if it flushed with a death ray? No, wait. Shit's not alive enough to merit a death ray. Disintegrator? "Man, how did I get so goofy? No wonder nobody at school likes me."

I'll go outside and do it on the sidewalk, I guessed.

Next to the toilet hole, there was an obvious bathtub, made of the same gray stone as the sink, with a little row of glassy "buttons" above one end. Light panel controls? I touched one. There was a hiss, and the tub started to fill up, though I couldn't see anything like a faucet, smoky fluid welling up from nowhere, filling the room with a familiar sharp, ugly smell.

Sulfuric acid? I certainly recognized the smell from first-period Chemistry class. Wonder how that's going? My lab partner had been a big beefy guy named Al, full of dumb jokes, who was a shot-putter and discus thrower on the track and field team.

There was another room that looked like a kitchen, by what had to be the back door, though it was on the side of the building, just like the back door to my parents' house. Something like a little oven sitting on the counter, an oven with a door. When I opened it, no gas jets or electric resistance heating elements, only a skinny light bulb thingy.

Right. I remembered my sister Millie's Easy Bake Oven cooked perfectly well with a hundred-watt light bulb. Scrambled eggs. Teeny-tiny biscuits. A birthday cake the size of a deck of cards. If I knew you were comin' I'd've. . . .

Nothing like a refrigerator? There was a long, narrow trough under the one window, the kitchen sink maybe? A roll of plain white paper towels hanging from the wall next to it. Great. Murray's mom had started using them, though at my house we still used cloth dish towels that would start to stink long before they went in the hamper. Dishrags, my mom said.

When I touched one of the glass buttons over the trough, it quickly

filled up with a bubbly gray, acid-smelling sludge. I stood there, paralyzed, knowing not to touch it, and thought, Right. *Destination: Universe!* "The Enchanted Village."

Is that where I am now, in an A.E. Van Vogt story?

Angry at myself, I tore the paper towels from their holder and went back through the house to the living room, intending to go out the front door. Hell, at least I've got toilet paper now and . . .

"*Yow!*" I hit my head on the wall as I stepped back, turning, trying to run. Stopped, willing my heart to quiet down, making myself turn back and look.

It was a bipedal man-shape, not quite a gort but similar, no more than four feet tall, standing beside the open front door, staring at me with two glowing red glass eyes. No, not really like a gort. Feet like a bird. Three-fingered hands. No, two fingers and a thumb, just like a thrint, but far, far more gracile.

Is the damned thing humming? No. Silent.

I stammered, swallowed, then said, "Henry Stanley, I presume?"

Nothing.

"Hey, buddy. Sorry to have to tell you I'm not David Livingstone. Just a lost little dipshit has got himself in a *pile* of trouble."

The head turned just a bit, red lenses focusing on my face, seeming to look right into my eyes. Then it said, "Beeoop-click, zing?"

Really. I said, "Pleased to meetcha."

Oh, hell. My guts cramped hard, released from terror, and I quickly walked to the door, the robot turning to face me as I edged around it. I walked out onto the sidewalk, avoiding the stringy blue and yellow grass of the lawn, which had wriggled and tried to grab my shoes as I'd walked across it last night, got out into the street and started to pull down my pants. Thought better of it, kicked off my shoes and pulled my pants off entirely.

I squatted on the pavement, suddenly really glad I had the paper towels. The mossy stuff from the woods I'd used on the starship had been really scratchy. Jesus, I wish I could have a fucking bath!

When I looked up, the robot was standing on the porch, watching me.

By the time dusk came round again, dark green sky flushed red in what I thought of as the west as the fat red planet-star sank through the horizon, I was exhausted, dragging my ass out one of the deserted city's radial roads, away from downtown, back out into the burbs. We'd been out to the spaceport, with its little patch of empty, unmarked concrete, then back to the museum, where we'd looked at every fucking exhibit, looking for a clue. Any clue.

We. Me and my little robot pal, which followed me all around, like a quiet puppy, plodding along in my wake, little metal bird feet clicking discretely on pavement and bare floor, soundless on the carpet that pretty much lined every building we'd visited so far.

"Pipe dream," I whispered, voice rasping like a cartoon character, mouth dry as dust.

The robot made some little *oot-boop* sound or another, as if a sympa-

thetic noise. There were always plenty of puddles around in the morning, but by noon they'd mostly dried up. I found one now, kind of oily and sludgy looking, knelt beside it, and leaned down.

"Fooco?" Slim metal fingers on my shoulder.

I looked up. "Man, if you know where there's any real water, this is the time."

Its head cocked to one side, not so much like it understood, as the way a dog looks at you when you talk to it. They want to understand, but they don't. I turned away, leaned down again and took a sip. Gagged. Spat. "Jesus."

Rubbing my hand back and forth across tingling lips, I picked a house, went up on the porch, robot clicking along behind me, opened the door and went inside, where it was already gloomy, only light coming from the windows. Finally, I sat down on the carpet, wondering what next.

"What did I think I was going to find in the fucking museum?"

The robot was standing there, looking down at me, red eyes bright, as if concentrating. Does it *really* want to understand? How the hell would I know? Just a robot. A robot made by aliens, rather than some little guy from the Bronx.

I had a vision of me and the robot, finding some way to mark down Earth in the big star map, then mark it out again on the dome of night. Of the robot leading me to some ancient apparatus in some old thrintun exhibit.

"Wally to Earth! Wally to Earth! Hey, can you hear me guys?"

The robot just stood there, continuing to stare. "Right. Only in stories. . ."

But this . . . but *this* . . . !

I whispered, "So what the hell should I call you? Friday? Nah, too obvious."

It made some random fluty sounds, like the ones Millie made on the recorder she'd gotten last Christmas.

"Tootle?" Like the train in the story. "I think I can, I . . ."

It suddenly reached out and tried to stick a metal finger in my mouth.

"Hey!"

It froze in position, then said, "Whee-oo. Dot-dot."

Mournful and sad. I lay back on the rug, curled up in a little ball, put my hands over my face and made some stupid little sobbing sounds. No tears though. Probably too dried out to cry. Rolled onto my back, stretching out, looking up at meaningless black shadows, my throat making a little clucking noise as I tried to swallow.

Well. There would be water in the morning. Hot, bitter water, but it hadn't killed me so far. I looked up at the robot. "You know how to turn on the lights, buddy? Is there a fucking TV here anywhere?"

Shit. I missed TV. When was I going to see *Gilligan's Island* again? What the hell would the Professor do in my shoes? Or Mr. Wizard? No, not that one. The owl one. Drizzle, drizzle, drizzle, drome, time for zis vun to come home. . . ?

Jesus, I miss a lot of things. Things I thought I hated. Mom and Dad. My sisters. My so-called friends. Murray. Even school. Maybe. Some time or another, still bullshitting myself as the room grew darker and darker,

'til all I could see were the robot's staring red eyes, I must have fallen asleep.

Woke up suddenly, opening my eyes on grainy darkness, pain roaring in my arm, sitting up, struggling to figure out . . . to find . . . my voice, yelling, echoing, something like a scream that'd started in my sleep.

The robot's bright red eyes were near me, making enough light so that I could see the gleam of its body, arms and legs and featureless face, could see the reddish-black outlines of things in the room, thrintun furniture.

I tried to stand, stumbling, twisting to look at my upper arm, pain radiating away from a black smear. Black and wet. Blood! I'm bleeding! I made some weird gargling sound, looking back at the robot, which seemed to be holding something in one hand, pinched daintily by its few fingers.

The clenched hand went to its featureless face, briefly, as if eating the whatever-it-was, though it had no mouth, then reached out and grabbed me by the arm, just below the bloody spot.

"No! No! Lemme go!" Shrieking, voice breaking.

Its other hand reached out and touched the wound.

Flare of white light.

Sear of pain.

Just like that, I blacked out.

And awoke again, clear-headed, salmon-pink sunshine flooding the room. The robot was standing over me, motionless, red eyes staring. No eyelids. Right. I sat up, no stiffer than usual, mouth still dry, dull ache like a bruise in my left upper arm.

Memory.

"Kee-rist . . ." still whispered.

Dream?

No. The sore spot on my arm was marked by a skinny white scar, like a really bad cut from a long time ago. Right. Fresh scars are red, then pink for a while. One that big would take months to fade. I touched it. Tender, but not too bad.

"What the hell. . ."

When I stood up, licking my lips, the robot backed off a few paces, staring right into my eyes. Then it lifted a hand and seemed to beckon. This way. This way. Come on. Turned and walked slowly to the bathroom door. Turned to face me. That hand motion again. Come on. What the fuck are you waiting for?

I followed it into the bathroom. "Well?"

When it reached out and tapped a glass button, the little room filled with pale pastel pink light, making my skin seem to flush with health and well being. I thought, If there's light at night, I'm going to wish for a book. It tapped a button on the wall over the hole in the floor. There was a flicker of dim blue light somewhere down the hole, a faint sizzle, a faint electric smell.

Yah. Disintegrator.

Why the hell didn't I just tap all the buttons in the house myself? Was I afraid? Jeez, I'd filled the tub, and the kitchen sink thingy. . .

It tapped the button over the tub, the same one I'd tried, the one that'd gotten me a tub full of battery acid. This time, some clear, smokeless stuff began welling up. All I could do was stare, watching it fill up, rubbing the scar on my arm, feeling my heart pound.

"All right," I said. I glanced at the robot, no expression possible, red eyes on me. "Something's going on. What? Ah, fuck." I reached out and stuck my finger in the stuff. No sizzle. No burn. Warm, though. Cupped a handful, brought it dripping to my face. Sniffed. Odorless. Put it in my mouth. Tasteless. Swallowed.

"Water."

Some little parrot-voice repeated, "Waw. Tur."

There was a prickling in the back of my neck, as if something were crawling in my dirty hair. I turned and looked at the robot. "You say something, buddy?"

"Beeee-oooo."

"Oh." Turned back to the tub, swallowing hard. Then I pulled off my filthy clothes, stepped over the rim and sat down. Sat down in warm water, leaned forward and plunged my face, rubbing my cheeks, where scruffy, patchy, half-silky, half-rough beard had grown out maybe a quarter-inch or so, opened my mouth and tried to swallow, came up gasping, choking, laughing.

I looked up at the robot, and shouted, "Jesus! This is wonderful!"

It said, "Waw. Tur. Wun. Dur. Full." Turned suddenly and walked away, leaving me alone in the tub.

I leaned back against the rim and sank down, feeling the water prickle all over, lifting scales of dead skin, old sweat, grime and dirt and who-knows-what, suddenly wishing for shampoo, for soap, toothpaste and toothbrush.

How the hell did it know I needed water? Sudden memory, me, screaming, trying to get away, blood on my arm, robot touching whatever to its face, the sizzle of the fleshwelder that made this scar on my arm.

I touched the scar, and thought, *Sample*. It took a sample for analysis. What was it they said in science class? We're seventy percent water? Something like that.

I wished for the bottle of nasty blue Micrin mouthwash sitting by the bathroom sink at home. I'd asked Mom to buy Scope, like Murray's parents, but it was green, you see, and Mom always liked blue stuff best.

I guessed if I washed my clothes in plain water, it'll help a little bit. Wouldn't it?

Better than nothing, anyway.

The robot came back, carrying a stone plate heaped with some smoky, steamy brown stuff, filling the bathroom with a smell like pork chops. Plain pork chops, no Shake 'n' Bake or anything . . . my mouth suddenly watered so hard I started to drool.

The plate, when I balanced it on the rim of the tub, was full of something that looked like very coarsely ground hamburger, closer to shredded than anything else, a lighter shade of brown than you see in cooked ground beef. I touched it with my fingertip, getting a little juice on my skin. Sniffed. Licked.

Yah. Pretty much like pork chop grease and . . . jerked. Looked up at my staring robot. "Synthesized from. . . ?" Nothing.

Smart. Smart as hell. Smarter than me. What else should I have expected from a star-faring civilization? A little thrill from somewhere inside. Better than *Arsenal of Miracles*. 'Cept, of course, for the parts about Peganna of the Silver Hair.

I picked up a chunk of crumbly meat and popped it in my mouth. Chewed. Swallowed. Took another. Not really much like pork. Kind of gamey, but not venison either. Suddenly, the plate was half empty, and my stomach wasn't growling anymore.

I said, "So. Ground Wally tastes pretty good. You got any Worcestershire sauce? I like Lea & Perrins best."

It said, "Ground. Wally. Good. No. Sauce."

"Oh, that's okay, I . . ." Stopped. Stared at those red eyes, realizing my nameless little robot pal had just said an original sentence.

Some time in the night I awoke, swimming up from a dream, knowing it was a dream, hating it, but knowing. Face wet, cooling, fingers gentle in my hair. I jerked the rest of the way awake, eyes opening on dim pink light, light coming from nowhere, everywhere, certainly not the square black windows.

There was a soft sizzling outside as the hot acid rain came down, tonight as every night.

The robot stroked its two skinny fingers and long thin thumb through my hair, animate, but hardly alive. "Wally. Wake. Up. Now."

I whispered, "Yeah." Started shivering, wishing for . . . something. Anything.

"Wally. Crying. In. Sleep." Still that jerky delivery, though it'd improved sharply as the day wore on. Saying words as words now, rather than crude, isolated syllables.

What the hell had I been dreaming about? It was already getting away, the way dreams so often do. Something about my parents, some fight they'd had only a few weeks before Dad had moved out. I remember Mom said "scumbag" and Dad countered with "whore." I remember their arguments were always like that, like they were playing some stupid game of one-upmanship.

I said, "Can you make me something to eat?"

"What. To. Eat." No intonation, but it'd picked up on infinitives now.

What, then? So far, it'd been able to make ground meat and cups of some sweet, fatty yellow milk. Wally milk? This count as cannibalism? I had a sudden pang of longing, realizing I missed Brussels sprouts, of all things. "Ice cream?"

"What. Ice. Cream."

What indeed. "Uhhhh . . . Milk. Sugar. Ummm . . ." Why the fuck don't I *know* this stuff? I could picture it in my head. Taste it. Desperately taste it. Vanilla. I love vanilla ice cream. I could even call up an image of a vanilla bean. But I don't think you could manufacture a vanilla bean out of the contents of Wally Munsen's carcass.

The robot reached out and slowly stroked my hair one more time.

I said, "It's cold. Frozen. Not hard like ice. . . ." realizing it wasn't cold here, that the robot might not know what ice was. "Soft. Mushy." I shrugged helplessly. "Maybe it's the fat that gives it that texture?"

I followed the robot out to the kitchen, curious about what it planned to do. Hell, maybe I could learn to run the synthesizer myself? All it did was put its fingers over four nodes, two on one side of the panel, two on the other. They lit up blue, and it stood there, motionless, for maybe a minute.

There was a soft gurgle, and a blob of white ice cream suddenly extruded from the bottom of the trough. Maybe a quart. The robot got a plate from the cupboard, reached in, scooped the ice cream onto it, and handed it to me.

"Ice. Cream."

I took the plate, sniffing at the blob. "Maybe." But it didn't smell like ice cream. Not quite. "You got a spoon?"

"No. Spoon."

I sighed. Might as well ask it to get me a MacDonald's. I stuck out my tongue and licked the surface of the stuff. No. Not ice cream. More like heavy cream. Maybe the way ice cream would taste if you left out all the flavoring. "Good enough. Thanks." I took a bite, getting it all over my face, and thought, Anyway, the texture's perfect.

Afterward, I washed my face in the bathroom sink, went back to the living room and curled up again, wanting to sleep. Some time before I drifted off, the robot came back and squatted by my side, reaching out and slowly stroking my hair. Cold metal fingers, but nice enough for all that.

There were days now, when I awoke with a sensation of intense well being. Fed. Rested. Someone to talk to. Sort of. The light flooding in the window slanted sharply downward, as if I'd overslept, looking almost orange on the gray carpet.

I got up, stretching, listening to the gristle in my back make its little sounds, realizing I felt better sleeping on the floor than I ever had on any of the too soft mattresses my parents had bought me over the years. Mom likes soft mattresses, so that's what everyone must like, hm?

I remembered my dad stretching in the morning, frowning as he arched his back. Not a clue.

I went to the door and out onto the porch. It was warm, soft breeze gentle on my bare skin. I walked over to where my clothes were draped over the railing and felt them. Dry, but stiff. I'd tried washing them in plain water, which turned out to be useless. Tried to get the robot to make soap, but it could only come up with something like Crisco, something that smelled and tasted good enough that I finally just ate it.

I'd put them outside to dry and forgotten them, acid rain leaching some of the color out of my pants, leaving little white streaks here and there.

Jesus. Mom will kill me.

I'd kept my shoes inside, and it was warm enough to go naked here. For now, anyway. I stretched again, peed over the railing into the grass, which wriggled and squirmed like it was trying to get away, then went back in the house.

"Robot?"

Nothing.

Awful damn quiet in here.

Went into the kitchen.

There was a plate of cold, pale brown meatloaf and a stone mug of yellowish wallymilk beside the trough.

"Robot?"

Felt my heart maybe pounding a little bit. No robot in the backyard. No robot in the bathroom. No robot in any of the other rooms, mysterious rooms, of the house I was making my home base. No robot in the street outside, or much of anything else moving. Grassy stuff stirring. Clouds in the sky drifting slowly, that was it.

No birds here.

No rats. No bugs.

I went back to the kitchen and slowly ate my cold breakfast. Thoughtful of robot to leave something. Thoughtful of it to let me sleep.

God damn it.

After breakfast I went to the bathroom and filled up the tub, trying not to feel scared.

Noontime. No lunch. No robot.

Finally, I put on my shoes and socks, went naked on out to the street and began to make my usual rounds, keeping my mouth shut, unwilling to make speech sounds that would go unanswered. Went out through the nearest city gate and walked to the empty spaceport, stood looking up at the grass-green sky, shading my eyes from the reddish-orange light of the brilliant noonday sun. No saucers. And no robot. Went back to the house and checked in.

No robot.

Very slowly walked downtown, walked to the museum, wondering what the fuck I was going to do if it was gone for good. Sure, I had a sink, a toilet, and a bathtub. I'd got water to drink, I could stay clean, I could take a crap indoors.

On the other hand, I never had figured out how to run the synthesizer. I'd stood there with my fingers on the right nodes, stood there feeling silly, wishing it to work, muttering "Abracadabra, open sesame, you fucking piece of shit. . . ."

The robot had stood watching, red eyes on me, and finally said, "Wally no can do." Getting good now, it was, though still with nothing like inflection.

"Go ahead you little bastard. Laugh!"

It said, "No can do, Wally."

No can laugh. What means word laugh, Wally?

And every night, it would sit beside me and stroke my hair while I fell asleep. I was going to miss that, even if I didn't starve to death. I went into the museum, willing myself not to cry. Anyway, what if it *does* come back? What if the ships never come again? What if I have to stay here forever? All by myself? Me and, maybe, if I'm lucky, the damn robot?

No, not forever.

I was barely sixteen years old, though.

What if I had to stay here for fifty years?

Fifty years eating my own synthetic flesh.

I got goosebumps, standing under the museum dome, standing in front of the useless God-damned star map. "Where the fuck *am* I?" My voice echoed under the dome, silencing me.

I walked over to the history section, to where I'd left off on the first day, to the aisles that dealt with what'd happened after the thrintun had made first contact, had been welcomed into the Galactic Federation, if that's what it was. There was a whole section of cool little dioramas there, each one showing a single thrint surrounded by another sort of being, behind them all, a deep image of another world, pink suns and green, yellow skies, blue, purple, gold, you name it. Usually, there was stuff like vegetation in a color complementing the sky, as with Earth, with its blue sky and green trees.

Like God had a plan of some kind.

My favorite diorama was a world with a pale, pale yellow sky, just a hint of yellow, a world that seemed to be all tall buildings and not much else, the aliens' version of Trantor, maybe? There were lots of different beings here, scattered among them a lot of land crab robots, which helped to give it scale. In the sky over the buildings was a flying saucer, and when you looked closely, very deep in the sky, shadowed by its color, there was a spome, obviously hanging in space, so big you could see it in orbit from the ground.

Are they all still out there? I wondered.

Or are they all gone?

What if all these worlds are as empty as this one, as the others I'd seen so far? I'd started thinking of it as the Lost Empire sometimes, wondering what could possibly have happened. Did the robot know? I'd asked, more than once, but had so far gotten no answer.

Either it didn't know, or didn't know how to tell.

Then a piping voice said, "Wally?"

My heart seized in my chest, then I spun around, "You're . . . uh."

I'd been going to say, *You're back!*, but the thing before me . . . was not a robot at all. Certainly not *my* robot. About the same size, but . . . pale gray skin. Big black eyes, slightly slanted. Noseless face. Lipless mouth. Two fingers and a thumb on each hand. Fleishy bird-feet.

More or less, I thought, like the beings they put on those Saucer books, paperbacks at Drug Fair competing for rack space with the science fiction I read. Who was it read that stuff? Kenny. Kenny, who would get something by Charles Fort, when Murray and I would be buying *Prince of Peril* or whatever Andre Norton title was out. What'd that book been called? *Lo!*? Something like that.

The being stepped toward me, lifting one of those peculiarly familiar hands. "I'm sorry I startled you."

"Who. . ." What?

It said, "It's me, Wally."

Uhhh. . . "Robot?"

The gash of a mouth seemed to smile. "Well, you can still call me that if you want, but I went for an upgrade. I'm really more of an artificial man now."

Artificial . . . an inane voice yammered in my head: What, then? Tor-Dur-Bar? Pinocchio? I remembered the joke about "my only begotten son" and sort of snickered.

The robot said, "Come on, Wally. Let's go home. You must be starving." Its intonation, I noticed, had suddenly gotten much better.

So. Nighttime. I lay on the floor, wrapped up in a blanket Robot'd produced from who knows where or God knows what, listening to the hiss of the evening rain, alien room suffused with a soft orange light. Even if I had a book, I wouldn't have been able to read it in this.

But I wanted a book anyway.

I kept my head down, chin tucked in, trying to lose myself somehow. Think about all the books you've read. Jesus. I'd read *thousands* of books, it was practically all I did! Why couldn't I remember them better?

I started again, imagining myself to be Ghek, slinking alone through the darkness below the pits of Manator, drinking the Ulsios' blood, finding myself on the cliff over the subterranean river, the one he assumed might wind up flowing toward. . . . Omean? The Lost Sea of Korus? Hell. Started to drift back. . . .

But I was Tars Tarkas, struggling to get my fat ass through the hole in the base of the tree, while John Carter defended me from the Plant Men, no wait, Carthoris . . . the pimalia blossoms, the garden in Ptarth, Thuvia. . . .

No use, me again, though now wondering about the reproductive systems of the Red Martians. Monotremes, obviously. I remembered we'd seen this film in science class one time, the biologist in the film flipping over a platypus, everyone in the class giggling nervously at the hairy slit on its belly. He'd pried open the slit, to more giggles, then . . . *damn!* There's an *egg* in there!

So, what then? When John Carter fucks Dejah Thoris, does he find himself bumping into an egg? What'll we call it, my incomparable princess of Helium? In my imagination, while they talked, old Johnny kept on humping her and . . .

Oh, great. Now I had a hard on. One of those real tingly ones meaning I'd probably come even if I kept my hands off it. On the other hand . . . right.

I flipped back the blanket, rolling onto my back, wrapping my fingers around the damned thing and . . . stopped, stock still. Robot was standing impassively over by the bathroom door, arms folded across its pale gray chest, featureless black eyes glinting in the orange light.

After a minute, it said, "Is something wrong, Wally?"

I could feel the nice hard on start to go spongy on me.

Then it said, "Would you like me to help?"

To my horror, my dick hardened right back up, Dejah Thoris's weird monotreme crotch displaced by an image of two-fingers-and-thumb reaching for me, as I remembered doing myself in the tub only a few days before, bright steel robot watching impassively from the door, red eyes motionless, expressionless, merely light bulbs, stolen from a Christmas tree.

It said, "Your facial skin is changing color, Wally. Turning pink. That never happened before."

My dick shrank out of my hand, suddenly soft and little again. Littler than usual. Kind of puckered. I said, "Uh. Sorry. It's . . . kind of different now. I . . ."

What *did* I want? Did I *want* it to help? A sudden vision of a difficult reality. The one where I live here, along with this thing, until I was old and dead. No pussy for you, dude.

Robot seemed to smile, making me think of all those jokes I'd been hearing at school for years. It. *It*. Not *he* for gosh sakes. It'd be like jerking off in a sock. A very friendly and helpful sock. It said, "I'll be in the kitchen if you need me. Call out when you're done. I'll bring some warm milk to help you sleep."

Then it was gone.

I wrapped the blanket around myself, suddenly feeling very cold indeed.

Did you ever wake up directly from a dream? No, that's not right. Did you ever wake up *in* a dream? The dream is running along, telling its tale, real as life, and suddenly you're there as *you*, knowing it's a dream, thinking about it *as* a dream, while the story continues to run.

In my dream, it was summer, June I think, and I was maybe ten or eleven years old. Fifth or sixth grade, so maybe it was 1961 or 1962? Maybe school just about to end, or just over, which'd put it no later than maybe June 8th or thereabouts.

We were down by the big clearing, big patch of bare dirt down by the end of Carter Lane, across from Kenny's house, where, sometimes, we could get together enough boys to play a real sandlot baseball game, back where the creek came in sight of the road, where they'd build that big private pool, the one where my parents refused to buy a family membership, in time for the summer of 1963. Right now, it was just scraggly woods and swampy ground, bare dirt ending suddenly where the ground sloped off down to the creek.

The little blonde girl and I were sitting on the horizontal trunk of a not-quite-fallen tree, looking at each other. What was her name? Of course I remember. It was Tracy, my age, in my grade and school, though not in my class. I only saw her out on the playground, at recess, and here on weekends.

Blonde, blue eyes, pale face, searching look. Thin, no sign of the adult she might one day become. Not yet. Her hair was done up in long braids that were wrapped round and round and pinned at the crown. Once, I'd asked her how come she always wore it that way.

"You'd be so pretty with your hair worn long and brushed out."

That searching look, blue eyes reaching for my childish soul. "My mom thinks it makes me look too grown up."

"Would you take it down for me now?"

I don't remember that I ever saw her smile. Not a sad little girl, just so serious. More like me than anyone else I'd ever met. She said, "I can't get it back like this by myself. Mom would kill me." For once, the frown faded away. "I wish I could though. I'd do it for you, Wally."

I could smile, and I did.

In dreams, you can see a future that didn't happen.

A couple of eleven-year-olds fall in love, despite the fact that her mom didn't want her "too grown up," despite the fact she never said a word about her dad, or just why she was so . . . not sad. Just so serious. Whatever it was, it made her see right into me. Maybe those two eleven-year-olds could've waited out the decade it would take, and, free at last, live happily ever after?

In real life, that was the day she told me her dad had been transferred, that she'd be moving away to Texas. When? Tomorrow. In the morning.

Then she'd looked up at the sun, shading her eyes, and said, "I better get on home. Mom doesn't know I'm out here." To my astonishment, when we stood up, she gave me a hug, fierce and strong, then turned and ran.

I'd walked home in the noonday sun, feeling that burn in my throat that means you want to cry, but can't. Mom was making lunch when I got there, tuna salad sandwiches with too much chopped celery. She'd looked at me, and said, "What's wrong?" Felt my head, looking for a fever.

I opened my eyes on the pink light of a Lost Empire morning, and Robot was sitting cross-legged by my side, slowly stroking my hair, which was getting pretty long, and rather greasy from the lack of shampoo. How do primitives clean their hair? I . . .

Rollled away hard, heart pounding.

It said, "I'm sorry, Wally. I won't do that anymore, if it bothers you."

I swallowed, wishing I'd stop waking up with an erection. Futile hope. "No. No. You just startled me. I can't get used to you like that."

"I'm sorry. It's not reversible."

I felt my face flush. "Never mind. It's okay."

"You want breakfast now?"

"Sure." Tuna fish sandwiches? Surely we can figure this out? As it stood up, I found myself looking at its featureless crotch. Not quite featureless. Kind of a faint divided bump, like you see on some of the neighborhood moms in their tight, white summer shorts.

Unbidden, as Robot turned away, heading for the kitchen, I wondered about "upgrades." Even from the back, you could see the shape was there, if not the details. Like a girl in gray coveralls.

The image of Tracy came up, briefly, from the dream. Not the shape of her, which, at that age, hadn't been much different from mine. Just the face, the eyes, the hair.

So. Robot can give me a hand job. It's already volunteered. And you've already managed to think of a blow job on your own, you sick bastard. What kind of upgrades are available? Just stuff thrintun would know about? What good is that? Other races of the Lost Empire?

Maybe the Saucer People from those paperbacks were real, and this was the closest thing to a human Robot could get for itself, from its stash of upgrades? So it tried hard for me when I describe food and stuff I'd like it to make. Remember the ice cream? Not to mention the "soap."

Heh.

That tasty soap. I'd had it again already, for dessert.

So what if I asked it to grow a pussy for me, as an upgrade?

What would I ask for?

I'd seen my sisters in the bathtub from time to time. Not much to work with there. An accidental glimpse of my mom one summer, changing her clothes in a room with the door open, her not knowing she was reflected in a mirror. Hell, I was maybe five years old back then. She probably didn't care if I saw her. Not yet.

I remembered I'd been startled by the black hair.

What else?

Well, there was a diagram in one of our encyclopedias. A line drawing labeled "vulva" that didn't make much sense.

Those magazines, the ones Murray's dad kept down in the basement? Nothing. I knew enough about human anatomy and the mechanics of commercial art to know those women's pussies had been swept away by something called an air brush.

I snickered, and thought, Jesus. Maybe I'd better just stick with soap? Maybe when I can get it to make me a cake of Lifebuoy, we'll try something more complicated?

Out in the kitchen, it was just finishing up making me some sliced meat, solid this time, rare and juicy, to go with my mug of milk. We'd tried for bread a few times, and wound up with something like grayish Play-Doh that tasted more like soap than the soap had.

I put my hand gingerly on its shoulder, realizing that I was really tired of this bland diet of sweet milk and venison-pork. "Robot?"

"Yes, Wally."

"Can you help me get back home?"

It turned toward me, giving me a long, long look out of those empty black eyes. "Are you so lonely, Wally?"

I swallowed past a tight spot in my throat and nodded, unable to speak. Yes, damn you. I miss everything about my nasty little life. Even the bad stuff. That hurt too. I wouldn't have imagined I would, just like I didn't imagine I'd miss my dad 'til he was gone.

It said, "How much do you know about accelerated frames of reference, and probabilistic space-time attractors?"

"Well. . . ."

That same long look continued. "Eat your breakfast, Wally. Take your bath, then we'll see what we can do."

By midmorning, it'd led me back through the town and out to the so-called spaceport once more. Led me out onto the empty concrete apron, off to one side, reddish-yellow sunshine warm and smarmy on my bare skin. I almost skipped my shoes this time, but Robot told me not to.

"No sense getting a stubbed toe, is there?"

Which made me remember when I was a little kid, pre-school, going to the beach with my mother's family. We'd lived in Massachusetts then, some little town outside Boston, and the beaches of New England are rocky indeed. Where did we used to go? Not Nantucket. That's an island where rich bastards live. Nantasket? That's it. I remember Grandpa took me to see a beached freighter one time.

Anyway, stubbed toes. Lots of them.

Robot said, "Stand over here, Wally. Right by me."

Then it raised its hands, making a slow sort of Gandalfish gesture.

My stomach lurched as we suddenly rose in the air, taking a patch of concrete with us. "Hey!"

"Stand still, Wally."

As the thing on which we stood went up and up, things like antennae, like giant radiotelescopes, like Jodrell Bank, like stuff on TV, began unfolding down below, swinging up into sight.

I whispered, "Open, sez me." "What's that from? A Popeye cartoon?"

The upward movement stopped, and suddenly a hatchway opened in the concrete between us. Robot gestured toward it, "Shall we, Wally?"

"What is this?"

"The spaceport information nexus and interstellar communications center."

"Oh." Muted.

Down inside was a room just like the main room of an airport control tower, complete with outward leaning windows and things like radar screens. Lots and lots of twinkly little lights, too. Red, green, blue, yellow, you name it.

It started waving its fingers at the lights and, outside, various antennae started groaning around, aiming this way and that, nodding upward to the great green sky.

"What're you going to do? Are you calling Earth?"

The empty black eyes fixed on me again. "No, Wally. I can only call installations with the same sort of subspace communication systems as these."

"Oh. Then. . ."

It said, "I need to find out what's happened, Wally, before I can know what's to be done, if anything." *If anything?* I felt sick. Then it said, "This will take a while. I assume you can find your way to the museum from here?"

"Well, of course." Robot thought I was stupid, did it? Maybe so. How many people accidentally stow away on an automated space probe and wound up stranded on a deserted planet?

"I'll meet you there in time for supper. That elevator cage over there will take you down to ground level." Then it turned away and resumed playing with all the little lights, while the big antennae creaked and moaned.

I stood and watched for a while, at a loss. What do I want? Do I really want to go home again, back to a pathetic little life that showed no promise of ever getting better? What if the Empire's *not* Lost? What if the saucers come again, this time full of light and life, full of things ever so much better than people?

What if there's *real* adventure to be had?

Eventually, I got in the elevator cage and went on my way, wondering if I could find something to do.

Take a while turned out to be an understatement. Two, three, four days and I gave up going out to the spaceport, gave up watching the antennae

wig-wag around, gave up watching the little lights twinkle, reflected in Robot's slanty goggle eyes.

Eyes like fucking sunglasses.

What's under them, ole buddy, ole pal?

It'd make me breakfast, make me something I could save for lunch, and would head on out, leaving me alone for the day, like a man going off to work, leaving his wife alone to fend for herself.

I remember my mom used to scream about that, back before the breakup. Dad'd come home from work, wanting nothing more than his supper and a quiet evening in front of the TV, and Mom would snipe and snipe, "I sit here all day long, looking at these same four God-damned walls. I want to get *out* once in a while!"

He'd look at her, lying on the couch in his boxer shorts, bleary eyed. "I'm tired."

You could see a kind of red light behind her eyes then. "Tired? Well, you won't be quite so tired later on tonight, I know that."

"Bitch."

Now he was gone, and Mom had a job of her own from which to come home tired. We were eating a lot of macaroni and cheese then. Macaroni and cheese, and meatloaf. I wondered if she thought about him sometimes, about how tired he'd been, and how she felt now?

On day five, it got dark before Robot came home. I was getting hungry, starting to worry, just the way Mom seemed to worry when Dad would be late getting home from work on nights when the traffic on US 1 clogged to a standstill. Should I go on out to the spaceport and see what was up? What if it wasn't there? What if it started to rain while I was out?

Then the door opened and Robot came in, moving rather slowly, it seemed. "Sorry I'm late. I'll get your supper now."

I followed it out to the kitchen, and, as it touched the blue lights over the trough, beginning the process that would extrude my meat, would fill my mug with milk, it seemed to move as though exhausted.

"Are you all right?" Scooping hot meatloaf onto a plate, it said, "This organic form is difficult to master. It seems I required another minor physiological upgrade." Then it pulled a second steaming plate from the trough, more meatloaf just like the first, and two cups of cool yellow milk. "Come on, we'll eat together."

We settled on the living room floor and I started in. Robot picked up a chunk of meat in its hand, turning it over and over, as if nonplused.

That's me, I thought. "What's wrong?"

It looked at me. "I have some inhibitions about eating what seems like it must come from a living being."

"Synthetic."

"When I was really a robot, I knew that. The organic processor seems to have a little difficulty with the concept."

"Hey, if I don't mind eating myself, why should you?"

"True." It popped the glob of ground wally in its mouth and started to chew. And I felt myself grow goosebumps.

Afterward, we had ice cream, sweeter now than before, with something very much like the vanilla flavor I'd been wanting. Robot took a taste, and

said, "This is good. Maybe next time I can make it better, now that I'm getting some idea of what it's supposed to be like."

But it put the plate down, hardly touched.

I put out my hand, not quite touching its arm. "Tell me what's really wrong."

Something very like a sigh. "Oh, many things, Wally."

I felt chillier inside than the ice cream would account for. "Such as?"

"I can't figure out how to get you home."

"Oh."

"And I can't figure out what's happened to my civilization, either. I don't know where they've gone. Or why they're gone." It pushed the other plate of ice cream toward me. "You have this, please."

"Sure."

After a while, I said, "Do you even know where we are?"

"Yes. My galaxy. My world."

"In the same galaxy as Earth?"

"I don't think so, Wally."

"Oh."

I finished the ice cream and Robot took the dishes away, walking slowly. By the time it got back, I was shaking out my blanket, starting to settle down to sleep, wishing again I had a book, any book. Christ, I'd settle for *Green Mansions* or *Lord Jim* now. Even *The Red Badge of Courage*.

Robot stood there, looking down on me, arms hanging loosely by its sides, looser than I'd ever seen, more than just exhausted. I threw back the blanket and patted a spot on the floor by my side. "Come on. If you need to eat now, maybe you need to sleep too."

It curled up with me under the blanket. After a minute, it grew warm, than another minute and I guess I went to sleep.

I awoke, eyes shut, not quite knowing what I'd been dreaming. Some real-life thing, I suppose, nothing bad, or the dream would still be a vivid shape in my heart. Something warm on my chest, not quite like hugging my extra pillow. And, of course, the usual hard on, but somehow compressed and tight, pushed against the base of my belly.

Oh, God. I'm hugging Robot!

I started to let go, trying not to panic, wondering what the hell was tickling the end of my nose.

Forced my eyes open. There was a neck right in front of my face. A skinny neck with Caucasian-white skin, rising into wisps of pale blonde hair. Long blonde hair drawn up into tight braids, braids wrapped round and round. . . .

I think every muscle in my body went into some tetanus-like spasm. I took a deep breath, so fast and tight my voice made this weird, high-pitched whoop, recoiled, rolling away, up onto my hands and knees, taking the blanket with me, crouching there, bug-eyed again, heart pounding like mad.

Pulling the blanket away like that spilled the naked girl over onto her face. She lifted her head and looked at me, out of bleary blue eyes, and whispered, "Wally. . . ?" her voice sounding tired and confused.

And I made that exact same sound Jackie Gleason used to make, dumbfounded in almost every "Honeymooners" episode, *humminahummina* . . .

She sat up slowly, turning to face me, sitting cross-legged, eyes brightening as she woke up, just the way a human wakes up. Pale skin, smooth all over, little pink nipples on a smooth, flat chest, snub nose with a little pale spray of freckles, big, *big* blue eyes, naked as a jaybird, but for the brass-colored bobby-pins holding up her braids.

"Good morning, Wally!"

I sat down hard. Swallowed. Or tried to, anyway. "*Tracy?*"

She cocked her head to one side and smiled, filling the room with sunshine. "I think so, Wally. Anyway, this is the girl you've been dreaming about."

"My . . . *dreams.*"

Funny thing. Usually when your mouth goes dry, it just *is* dry, all at once, or maybe before you notice it. This time, I felt my spit absorbed by my tongue, like water sucked into a dry sponge.

She said, "Yes, Wally."

What was the name of that story? Silverberg, was it? In the *Seventh Galaxy Reader* or maybe *Best From F&SF*, Seventh Series. The one where the telepath sees people's thoughts as run-on sentences connected by ampersand characters.

"You can . . . read my mind." Flat. Nervous. Sick.

She stood slowly, stretching like a real human, as though stiff from sleep, hips slim, just the littlest bit of fine blonde pubic hair in a patch above that little pink slit.

Eleven years old, I thought. I remembered most of the girls in junior high started to grow tits when they were in seventh grade.

She saw where I was looking and smiled, then said, "Sort of. Not as well as I'd like to." Then gave me a funny look. "How do you think I learned to speak English? From listening to you chatter?"

I snatched my eyes away, feeling my face heat up. Yes. That's *exactly* what I'd thought.

"Uh. Does that bother you? My talking all the time?" It bothered a lot of people, including my parents. I think it even bothered Murray, though most of the time he was willing to listen.

She said, "Oh, no, Wally! I love talking to you!" Eyes brightening. I suddenly remembered Tracy'd said that to my eleven-year-old self, once upon a time. Then this Tracy—*Robot*, a hard voice in my head snarled—said, "This is the coolest thing that's ever happened to me!"

Ever happened to Tracy? Or to Robot? I said, "Yeah, me too." I curled myself into a seated ball, knees against my chest, heels pressed together, wishing the God-damned hard-on would go away. Bathroom. You just need to take a piss, that's all.

Tracy . . . No! For Christ's sake. *Robot!* Robot's bright blue eyes were on my face, filled with something that could pass for empathy. The empathy in a story, anyway. She came over to where I sat, kneeling down, put a warm gentle hand on one of my knees, leaning so she could look right into my eyes.

It. It, not *her*.

I don't think there's a word for how scared I was, right then.

She said, "Would you like to try the thing you've been dreaming about, Wally? There's not enough detail in your dreams for me to work with, but your genetic matrix may have contributed enough X-chromosome-based hardware and instinctual behaviors to get us started."

I flinched, aghast, at Robot, at myself. Stuttered hard, finally got out, "But . . . you're still a *child*!" The real Tracy, my Tracy, would be sixteen right now, more or less grown. This . . . *thing* . . .

She sank back on her heels, looking sad, just the way the real Tracy had looked sad, sad and serious. "I'm sorry, Wally. I didn't know that would matter."

For breakfast, Robot managed something a lot like bland French toast, with a lemon-yellow glob of something I suppose you could call wallybutter, though nothing like maple syrup, not even the imitation nasty Mrs. Butterworth's crap my sisters demanded, just so they could see the bottle and repeat the "when you bow down this way!" line from the commercial.

Every time they did that, I'd remember my own infatuation with the Log Cabin tin less than a decade earlier. It seemed different, somehow.

Robot brought the plate to me as I soaked in the tub, chirping, "See, Wally? I'll figure out a way to make you real bread yet!" Then she stepped over the rim of the tub and sank down at the opposite end with a cozy little grin, chin barely clearing the surface of the water.

"Uh." I looked at the pile of sticky squares, steam rising, yellow butter-stuff slumping as it melted. "Is some of this yours?"

She took a square, dipped one corner in the butter, and took a bite. "Mmmmm. . ."

Afterward, clean and dry after a fashion, Robot's hair clean anyway, since it was brand new, we set out, I in my grubby shoes and socks because Robot insisted, though she herself was barefoot, feet slapping quickly on the pavement to match my pace. I'd thought about putting on my clothes, but they were still draped over the railing, so weathered and stiff now I suppose they would've felt like crumpled newspaper on my skin.

I settled for keeping my eyes to myself as I followed her down the road. "Where're we going, Robot?"

She turned suddenly, stopping before me in the street, looking up at my face, eyes bigger still, going back to looking . . . not sad. Wistful? Maybe that was the way Tracy had looked, not sad, not serious, and the eleven-year-old me just hadn't known any better?

Softly, she said, "I'd like it if you call me Tracy."

Thunderstruck, I thought, This is a *robot*. Not a little girl. Not Tracy. Tracy, my Tracy, is sixteen years old, somewhere on Earth, probably still in Texas, and I . . . that other voice, dark voice that sounded to me like my dad's voice, whispered, It's just a robot. And *if* it's just a robot, what difference does it make if . . . ? I slammed the door on that one.

Then I said, "I'm sorry, Tracy."

She smiled. Brightening the day.

"So. Where're we going?"

She pointed to the dome of the museum, not far away in the middle of the town, where all the radial streets came together.

Inside, she led me right to the big blue-white-red spiral galaxy hanging under the dome, standing beside it with hands on hips, head tipped back, looking up. I wondered briefly where the bobby pins had come from, other than my memory, my dreams. From the hemoglobin in my blood? And what about the brassy color? Shouldn't they be steely-looking? Tracy's bobby pins had been brassy, though. Maybe there were copper molecules in the tissue sample.

Tracy started manipulating a panel of sequins down by the pedestal, and the galaxy vanished, replaced by a shapeless, irregular splash of light and dark that looked almost like an explosion.

She looked up at me. "This is what your culture has just begun to conceptualize as a Supercluster, Wally. It's a map of the entity you've been referring to as the Lost Empire."

My scalp prickled briefly at that reminder, but . . . hell. I was *used* to the idea of telepaths. Maybe that's what made it more all right for me than it would have been for somebody else. I imagined my mom thinking someone could look into her head.

It didn't look like anything I remembered hearing about. Still, if she knew the term, it had to be in my head, somewhere. Some article in *Scientific American*, maybe? I'd always been glad the Prince William County Public Library took it. "How big?"

She said, "Oh, it's about three hundred million light years across, maybe." Off to one side, a pinpoint sparkled, catching my eye. "That's where we are right now."

"And . . . Earth?"

She said, "You don't know enough about the structure of the universe for me to tell."

"Uh. Sorry."

She grinned, then made another pinpoint twinkle, way off to the other side, pretty much outside the edge of the great splash of light. "Your Local Group might be right there. There are five galaxies matching what you know as the Milky Way, Andromeda, Triangulum, and the Magellanic Clouds, in roughly the right positions, though you're awfully hazy about where they really are, and exactly how big."

"Sorry."

"And there are at least twenty other galaxies mixed in with them that your astronomers must have noticed."

"But not me."

"No, Wally."

"Well, even if that *was* Earth, there's no way. . . ."

She made a third spot sparkle, this time deep ruby-red, deep in the heart of the Lost Empire Supercluster. "There's a research facility here, at one of the Empire's main educational institutions, where we can . . . figure it out, one way or another."

"But. . . ."

She said, "If we could get a starship, we could get there in just a few weeks, Wally."

I suddenly felt odd. "And . . . Earth?"

That wistful look. "If that's really your Local Group, not much longer."

"Where else would Earth be?"

She said, "Wally, the thing you were on was an automated space probe, just like you thought. We'd been exploring the other superclusters for a long time."

"So Earth could be anywhere?" For some reason, that made me feel . . . I don't know. Lighter. More carefree?

She said, "Yes."

"What if it's somewhere on the other side of the universe?"

She laughed. "There's no 'other side,' Wally."

"Very far away, anyhow. Your ships seem so fast."

She said, "If Earth's not somewhere nearby, we may never find it. You seem to have no idea how big the universe really is."

"One of your probes found it."

"Yes. And that may be our only hope. The probes didn't have infinite range."

"Anyway, we don't have a starship."

She turned away from me then, looking out through the dome of the museum, up at the deep green sky. "I don't know where everyone's gone, or why, but the communication network is running just fine. I've been able to wake up some sleeping nodes here and there, send out program code, get a few things moving. Our ride will be here soon."

Then she looked at me and laughed again, I suppose, at the expression on my face.

And so the empty world of the dark green skies was gone, never to be seen again, Tracy and I now camped out by a bubbling stream in the soft garden wilderness of a pale orange spome, pale orange landscape separated by broad stripes of blue velvet hyperspace sky. There were no dinosaurs here, and I was, in a way, sorry for that, because I'd liked them, liked the idea of them, but red-silver butterfly-bats floated through the air overhead, perched in the pale orange trees, while spidermice crept through the pale orange grass, speaking to us in gentle whispers.

Only little things, gentle things, safe things.

Arriving here, we'd walked away from the field of saucers, this one without fence or razor wire, while the Green Planet shrank away to nothing in the starry sky, and Tracy said to me, "No, look, you got it all wrong, Wally. *Thrintun* was the name of their planet. The Slavers just called themselves Thrint."

"Are you sure?"

She smiled. "That's what's in your long-term memory. Your short-term memory just reloaded it wrong. Of course, I can't guarantee it's what was really in the story."

"Um."

She'd led me to a long, low, warehouse-like building, where we picked up magic toys, then walked away into the woodland, while the starship

groaned off into hyperspace and the windows above us turned soft blue, in perfect contrast to the landscape, both around us and overhead. Eventually, we came to a meadow, orange grass, widely separated orange trees, kind of like gnarly little crabapple trees, complete with little orange fruit, a scattering of ruddy yellowish flowers, tiny creek chuckling over bits of round brown stone.

We set up the tent, spread our picnic blanket, and one of the magic toys Tracy had taken turned out to be something like a hibachi, complete with built-in burgers, already smoky hot, smell making my mouth water.

I touched one, and found it cool enough to pick up, the perfect temperature for eating. "What are these things?"

She said, "I don't know. But they're chemically compatible with our bodies."

When you looked close, they weren't really hamburgers. Bready disks of some kind, nicely toasted. I took a little bite. "Ukh. . ."

A fleck of concern lit in her eyes. "Not good?"

I took another, bigger bite, chewed and swallowed. "Weird. Mustard and cinnamon don't really go together."

She smiled. "I notice it's not stopping you, though."

"No." I finished it, and took another. "Can this thing make hot dogs?"

"Probably."

Hot dogs with integrated buns. Great. In what book did I read the phrase, *société anonyme d'hippophage*? I gave my head a shake, trying to banish nonsense. If possible. Christ. Me. Anyway, I'm not eating wally anymore. Good enough.

I said, "Who used to live in this place, Tracy? I mean, orange grass and all. . .?"

She said, "Nobody ever lived in these things, Wally. They were part of an automated transport system, and I think what happened is, the sample ecologies spread out in here. The spomes have been wandering around on their own for a very long time."

"How long?"

A thoughtful look. "Well, from the time the first star-faring civilization got started to my manufacture date, something like a billion of your years."

My mouth got that familiar dry feeling. "That's not what I meant."

She said, "Based on astronomical evidence, I think I was asleep in storage for a significant fraction of that. Perhaps a hundred million years?"

"From before the end of the Cretaceous, and whatever killed off the dinosaurs?" And clearly why the robot spomes could have them in their possession. I remember some scientists theorized about a supernova.

She said, "I don't think there was any relationship. Wherever Earth is, it must be outside the range of the event that . . . got rid of everyone." A momentary look of intense brooding in the eyes of a china doll, quickly banished.

"And you have no idea how the Lost Empire got lost."

"Not yet. It's illuminating that only the organic intelligences were lost."

"It's hard for me to believe this," I waved my hand around the spomey

landscape, "all this, all the stuff on all the planets, has survived, intact, for a hundred million years or more."

Another smile. "Not unattended, Wally. Just unpeopled."

"Oh. Right."

I lay back and looked at the sky again, staring at blue hyperspace, wondering what would become of me. What if we find Earth? What then? Just go home? I tried picturing that, imagined myself appearing, bareass, back in Dorvo Valley, with a naked little blonde girl holding my hand: Hi, Mom! Sorry I'm late! Hey, look what I found!

Tracy said, "You have an erection again, Wally."

I rolled away from her, curling up around myself, facing down slope, toward the trees and little creek. "Sorry."

She said, "Look, I know we can't do the thing you've been dreaming about, not without risking damage to some components of this immature body, but I can still help with those other things."

I thought, What about damage to me?

After a long moment, she reached out and touched my back softly, making me flinch. Then she said, "I *will* grow up, you know. This body is as real as your genome could make it."

I said, "You're eleven, Tracy. It'll be a while before you're all grown up."

She said, "I'll be physically mature enough for successful intercourse in no more than twelve to eighteen months, if you really want to wait."

I looked over my shoulder at her, baffled. "I can't believe I'm talking about this stuff with a little girl."

Softly, she said, "I'm not a little girl, Wally. I'm a robot, remember?"

I looked away again, remembering she'd wanted to be called Tracy, rather than Robot.

Another girlish sigh. "It's so hard for me to know what's right, Wally. Your memories of your real cultural surround are all mixed up with what was in those stories you loved. As if your culture itself were somehow confused. As if it couldn't distinguish between dream and reality."

That made me laugh. Really laugh.

To Tracy's disappointment, what she called the Master Planet seemed to lie in ruins. And *what* ruins!

Ruins, real ruins, are thin on the ground for an American boy in the 1960s. I remember Murray and I used to argue about that, as we tried to write stories about our imaginary Venus, Murray wanting ruins to be like Pompeii, like the Coliseum, seen in books, in movies, on TV. Like one of Burroughs's African lost cities, or like Koraad on Barsoom. Murray'd never seen a real ruin, having traveled so little, having lived only in New York City and the suburbs of Washington, DC. I'd lived in the Southwest, and my parents had taken me to see Mesa Verde, to visit Chaco Canyon.

Real ruins, of real abandoned cities, sitting out in the weather for hundreds of years, are different from maintained ruins, like the Coliseum, or cities preserved under volcanic ash for thousands of years. Burroughs was in the Army in the 1890s and served in the Southwest. Why didn't he know that?

The cityscapes of the Master Planet were like that. Stumps of buildings

with their foundations exposed. Crumbled, fallen walls. A sense of haze and dust everywhere.

We stood by our flying saucer, and Tracy said, "Whatever happened, happened here. And there was nothing left behind to keep things up."

Keep things up, I thought, awaiting the owners' return.

In the end, a few days later, we wound up on something Tracy referred to as a "substation," some adjunct of the Master Planet, one of many apparently scattered round the Lost Empire. From space, seen out the saucer window, it looked like a little blue moon, hardly a planet at all, a little blue moon surrounded by ghostly white radiance, and, though I looked and looked, nothing else nearby. No sun. Not even an especially bright star. No gas giant for it to orbit. No nothing.

On the ground . . . well, no. Not ground. The place was like a cityscape, but the buildings were made of something like sheet metal, tin, copper, zinc, varicolored anodized aluminum, streets paved with sheets of rolled gold, nothing but metal everywhere but the sky.

From under the saucer's rim, I just stood there, looking up, at a pitch black sky flooded with so many stars it lit up the landscape, making a million little shadows in every dark corner.

"Man. . . ."

Every now and again, there'd be the quick yellow streak of a meteor.

"Where the hell are we?" Up in the sky, it was as if there were some shapes hiding behind the stars, faint washes of light that disappeared when I looked at them.

Tracy put one cool hand on the small of my back, making my neck hair tingle. "We're in an irregular galaxy. There's a lot of dust. Nebulae. Lots of really young stars."

Like a Magellanic Cloud. I, uh. . . . "Was this galaxy even here a hundred million years ago?"

"Yes. These galaxies evolve fast, and they don't last as long as the spirals, but they're not ephemeral. They also don't have much in the way of naturally habitable planets. We used them as resource centers. Industrial complexes."

We. My little Tracy, the Space Alien.

She said, "I've got a lot of work to do, Wally. Why don't you go sightseeing? I'll find you later."

"Uh. . . ." I felt a sudden chill, turning to look up at our saucer.

She smiled. "I won't let it go anywhere, Wally." She patted me on the arm, then turned and quickly walked away into the shadows.

Sightseeing. Was there anything here to see? I started walking, but there wasn't much. Metal buildings. No, not even that. This kind of looked like the stuff inside a machine of some kind. Maybe an old TV. Except no vacuum tubes or anything. Like lifting the hood of a car, and not knowing what you're looking at.

I remembered I always resented those boys who knew what cars were about. Resented that I couldn't learn, that Dad wouldn't let me help with our car. Goof, he'd say. You'll either break something or hurt yourself. When I was missing Dad, I wouldn't remember stuff like that.

Everybody was always mad at me about something.

There was something kind of like a lake. No, more like a pool. Round, but full of cool, fresh water, surrounded by a soft area. I wished for grass, but this stuff was more like a satin comforter stapled to a slanting floor. Nice to sit on naked, though.

A little too cool to sit here naked.

I went back to the saucer and got one of the picnic blankets we'd taken from the spome, came back to the little pool and sat again, all wrapped up, looking out over ersatz cityscape, remembering that where my dad had taken German in college, Murray's dad had taken French, so Murray would say *faux*, where I said *ersatz*.

What if I could pick and choose my companions? Who would I bring here now?

Murray? Would I want Murray here with me now? My best friend since second grade, my best friend ever, maybe my only friend? I remember the day before I left, running into Murray in the high school corridor. Larry was standing with him, the two of them talking about something. They shut up when they saw me, Larry smiling, Murray's eyes full of that now-familiar contempt.

What the hell did I do to make this happen, Murray?

The longer I stared at the sky, the easier it was to see those shapes embedded in the deeper dark. All I had to do was not quite look at them, pretend to be looking at something else, but pay attention to the corners of my eyes, and shapes of wan light would pop out of nowhere.

If Murray was here, I guess I'd get some lecture about "averted vision," his eyes full of amusement as he showed me, once again, how really cool he was, how smart, how much better than me at everything and anything.

I felt my eyes start to burn, and had to put away all those questions. Except: there's no one I want with me. No one at all to go back to. Why is that?

Three meteor trails burned overhead, dazzling yellow, side by side in the sky, like a long, hot cat-scratch. Maybe I dozed after that.

Came back from wherever, not knowing if I'd slept or not, for the sky was unchanged. Darkness, stars, and the faint shapes beyond. Jumped slightly at the shadow standing by the rim of the pool's little arena, girl-shape looking down at me.

"Tracy?"

She walked down across the satin groundcover, until she was close enough to see by starlight, eyes vast, face so soft and lovely. What would've happened, if you hadn't moved away, five years ago? Nothing. Your mom would've found out about us, would've talked to my mom, and we'd've been ordered apart, "just to be safe." Boys and girls that age aren't allowed to like each other.

Something wrong though, here and now.

I said, "Are you all right? You look sick."

She kneeled down beside me, and I could see there was a shine of sweat on her.

"What's wrong?"

She said, "I'll be all right. I had to have a little more work done on myself, while I was at it. They have much better equipment here than back on the Green Planet." She seemed to shiver.

"Oh, Tracy. . . ." I gathered her in and wrapped the blanket about us both. She was hot and clammy, not that dry heat like when you have a fever; more like something inside was heating her up, making her sweat, making the night feel cold.

When I was about five, my grandpa, who died drunk, got me to drink a glass of whiskey, laughing when he saw I could get it down without gagging. It made me sweat like that, once it was inside. I remember my mom went apeshit over it, cussing Grandpa like I'd never heard before, but there was nothing to be done. All I did was go to sleep, and wake up the next day feeling like I was full of helium and ready to float away.

She snuggled in close, arms around the barrel of my chest, her sweat getting on me, starting to run down in my lap, making me shiver too. "I'll be all right. Really." Hardly more than a whisper.

Well, then.

She said, "I found the Earth."

Smarmy pang of fear. "Um. . . ."

She said, "Really not that far. No more than two hundred million parsecs. On the far side of the next supercluster from here."

"How long?"

I could feel her face change shape against my chest. A smile? She said, "Well, that depends."

"On?"

She squeezed me a little bit, shivering a little harder. "Well, it only took you a few weeks to reach the Green Planet, so that's all it'll take to get back. . . ."

Damn. Mom. School. Murray.

And no way I can explain where I've been, much less who this little girl might be. Sudden cold horror. When I get off the saucer in Dorvo Valley, Tracy, my Tracy now for sure, will get back aboard and go away?

There was a brief clicking sound, then she said, "But the hyperdrives are not immune to Relativity, Wally."

I thought about my homecoming, in those stiff old clothes waiting for me in the saucer, turning up at Mom's house on Staggs Court, in, what? Maybe March 1967? By now, Apollo 1 will have flown. And I'll have to repeat the eleventh grade.

Yep, *that'll* make Murray jealous, all right.

Then I said, "Huh?"

More clicking. "You left Earth twenty-three years ago, Wally." More clicking. "Some of that was lost in local travel." Clicking. "If I take you straight home from here, it's only another twenty." Clicking. "But only three weeks, starship time."

She started to shudder really hard against me, and I realized the clicking sound was the chatter of her teeth. "God, you are really sick!"

Sweat was pouring off her now, running down between my legs and pooling on the satin. She said, "Just hold me, Wally. I'll be all right in the morning. I promise."

I wrapped the blanket tight around us both, feeling the heat increase, and just sat there, staring at the sky, while Tracy shivered and chattered, murmuring to herself, sometimes real words, sometimes things that sounded like foreign languages, nothing that made any sense.

Twenty-three years, I thought. 1989? And then another twenty?

Up in the sky, the stars marched slowly overhead, old ones setting, new ones rising, showing me the orientation of the blue moon's axis. Meteors would burn by ones and twos and threes, until I paid attention and found the swarm's radiant. That, I thought, must be the direction of our travel through interstellar space.

Once, something like a pink Bonestell moon appeared out of nowhere, just a dot in the sky at first, then swelling to a huge, pockmarked balloon, before shrinking away to nothing again.

After a long, long while, Tracy's shivering started to die down, her skin to cool. Maybe, I thought, the worst is over? After another long while, despite my determination to stay awake, to hold her, guard her, protect her, I fell asleep.

It was, of course, still dark when I awoke.

I was lying on my side under a sky full of stars, arms wrapped around Tracy, her back pressed to my chest, my face buried in the tickle of her hair, which had come loose from her braids. It wasn't wet with sweat any more, but seemed greasy, with a funny smell to it, not much like the dry wispy hair she'd had since she so magically appeared.

I had my usual erection, pressed up against her, painfully hard, harder than usual, in fact.

No more fever.

Her skin, rather cool, was no longer drenched with sweat either, and not dry. Kind of oily. Or greasy, like her hair.

Very cool. So very cool that . . .

I felt my heart start to thud in my chest.

Oh, Christ.

Something wrong with the way she feels, too, as if she's suddenly gotten fat. Or, loose. No more muscle tone, I . . .

I started to reach for her heart, holding my breath, terrorized, suppressing my thoughts, not wanting to know until I *knew*. What the hell will I *do*?

She stirred in my arms, taking a deep breath, making me freeze. Took a deep breath, stiffened, seemed to stretch, then curled up a little tighter, flabby chest skin settling across one of my arms, the one that'd been reaching to feel for her heartbeat.

I whispered, "Tracy. . ."

Her voice was hoarse, and foggy, as if she were very, very tired. "Here, Wally."

I cupped part of her chest in my hand, and thought, Wait just a second here. . . .

She twisted then, twisted over onto her back so she could turn toward me, eyes shining in starlight, teeth a flash of white in the shadows of her face. And then she said, "Accelerated maturation. Oh, I know I'm still a

little small. I can't add mass overnight, but the machinery did figure out how to get me to endstage pretty quickly."

She took me by the wrist, pulled my hand off her breast and dragged it down between her legs, down into the hot and wet of her, and said, "No more excuses, Wally."

To my amazement, I knew exactly what to do.

We stayed down by the lake, tangled together under the stars, until I got so hungry I started to get dizzy, even lying down. It was hard walking back to the saucer, not just leaving the magic shore, but because Tracy tried walking so close to me, I kept tripping over her.

Finally, we settled for holding hands as we walked, and I couldn't stop smiling, feeling like I was flying through the air. Different. Different. This was . . .

I said, "I feel like a grown-up now! How can just one fuck make me feel so different?"

Tracy laughed, stopping and turning to face me, looking up, holding both of my hands in hers. "Well, more than one. . . ."

Technically speaking, I guessed that was right.

"Do you want to go home now?"

My smile must have gone out like a light.

"Wally?"

I said, "Unless you've got time travel, my home's gone. I can't *imagine* what Earth must be like in 2009. Maybe there's been an atomic war by now."

I remember I'd tried to write a story when I was in the eighth grade, a story I called "Bomblast," set in the far future year of 1981. I'd known roughly how many nuclear weapons America had in 1963, then tried to extrapolate forward a couple of decades, and come up with something like thirty thousand warheads. Okay. So give the same to the Russians. Then I'd tried to imagine a war in which sixty thousand hydrogen bombs went off all on the same day.

I couldn't write the story, but I could imagine it.

Tracy said, "All those stories, and you still can't imagine 2009? What good were they?"

"I don't know."

She said, "If we don't take you home, then what do you want to do?"

I ran my hand down her bare back, and discovered she wasn't tall enough, or my arms long enough, to grab her by the ass.

She giggled. "If you don't think of anything else, that's all there *is* for us to do."

"Suits me."

She gave me a squeeze. "You'll get sick of it, sooner or later, Wally."

"Impossible."

"Well, let's go. We'll think of something, some day."

As we walked the rest of the way back to the saucer, I thought of something else. "Tracy?" She looked up. "Did you ever find out what happened to your people?"

She looked away for a second, putting her face in shadow. "I wasn't really *people*, Wally."

I felt bad for making her think like that. "You are now."

She smiled then, just the way I'd always wanted the original Tracy to smile. "Yes. Thanks to you."

Me?

She said, "But I found something, Wally. You know how I told you the hyperdrives experience time dilation?"

I nodded.

"Well, the citizens of the Empire lived a long time, compared to humans, largely from perfected medical treatment, but they were hardly immortal. The universe was, in a sense, closed to them, just the same way the stars are closed to Earth."

Right. Apollo/Saturn would get us to the Moon by the end of the decade, to Mars by 1984 or thereabouts, maybe even to the moons of Jupiter by the end of the century. But the stars? Never.

There was that alternative vision of 2009. The good one. Rather than an Earth blasted away to slag by tens of thousands of nuclear explosions, maybe Murray did get to be the first man on Mars, the way he said he would be, Murray on Mars in his mid-thirties. Maybe I'd go home and there he'd be, commanding the first expedition to Saturn.

Jealous?

No. *I* was holding hands with Tracy.

She said, "I think they were working on a new type of space drive, one that would have been virtually instantaneous, given them access to all places and all times, all at once."

What the hell book had I read where they had some kind of instantaneous radio? One of those Ace Doubles? *Rocannon's World*, maybe.

"The evidence is spotty, but it looks like the event sequences all stop when they switched on the test unit."

"So. . . ? Where'd they all go?"

More shadow, this time deep in her eyes. "I don't know, Wally. I think maybe they went to the Omega Point."

I waited for a minute, but she didn't offer any more, and I decided not to ask. After a bit, we went up the ramp and into the saucer, lifting off for our spome.

Sightseeing.

Sightseeing and fucking.

So much fucking, I probably would've lost another twenty pounds and gotten as skinny as a rock star, except that Tracy insisted she had to eat, if she was ever going to grow. I didn't mind her only being four-foot-nine, but it didn't seem fair to make her stay little, and since I had to hang around while she was eating, I guessed I might as well eat too.

Eventually, we wound up going to a world Tracy found in one of those magical electronic information nodes she could access, something she said would interest us both, and it did: a planet-sized museum that'd been the Lost Empire's biggest tourist attraction. Like the Smithsonian and the Guggenheim and the Louvre and everything else you could possibly think of, all rolled into one and then enlarged a million, billion times.

What can I tell you about the history of a billion years? A billion years, a hundred billion galaxies, all of it stuffed into a tiny corner of an incomprehensibly larger universe?

I remember standing in a hall with more square footage than the Pentagon, detailing the history of a nontechnological race, a people who looked a little like vast shell-less oysters, slimy and featureless gray, who'd devoted a hundred thousand years to perfecting an art form that looked like nothing so much as boiling bacon grease.

The stories got it wrong, I remember thinking. All those story aliens were nothing more than Chinamen and Hindoos in goofy rubber suits pretending to be wonderful and strange. Even the best of them . . . Dilbians? Talking bears from a fairy tale. Puppeteers? Kzinti? I remember I'd liked all that stuff, but what's a few more intelligent cows and giant bipedal housecats among friends?

Tracy and I walked the halls, and fucked and ate and sightsaw, and one day wound up in a great dark cavern of the winds, in which were suspended ten thousand interstellar warships, bristling with missile launchers and turrets and ray projectors.

The Chukhamagh Fleet, the narrative node named them, most likely inventing a word I could pronounce, at Tracy's behest. They'd been hit by the expanding wave-front of the Lost Empire, and, being a martial people, had decided to make a fight of it. The local police force, if you can call them that, dragged the fleet straight here to the museum, where they made the crews get out and take public transportation home.

So there we were, sprawled on the floor on a picnic blanket, dizzy from exertion, sweat still evaporating, in front of a kilometer-long star-battleship that looked better than anything I'd ever seen in a movie.

Look at the God-damned thing! What a story *that* would've made!

Hell, maybe somebody did think of it.

Maybe it was written and published, and I just missed it.

Maybe . . .

I rolled on my side then, looked at Tracy and smiled.

You could see she was expecting me to crawl right back on top of her, but what I said was, "Hey, I've got an idea! Tell me what you think of *this* . . ."

The automatic pilot dropped us out of hyperspace just outside Jupiter's orbit, just as planned, and gave a delicate little chime to get our attention. I guess we were about done anyway, getting up off the command deck floor, using the blanket to dry off a bit, plopping down bareass in those nice leather chairs the Chukhamagh had been so proud of.

Not really comfortable, especially the way my nuts kept winding up in the crevice the Chukhamagh made for their beavertails, but good enough.

"Let's see what we got here."

I let the autopilot find Earth with the telescope optics, frosted blue-white marble swelling to fill the vidwall. Hmh. Not exactly the way I'd expected. I guess I didn't really pay attention on the way out, so I'd keep expecting to see the continents on a globe instead of blue with white stripes and a hint of tan here and there. What's that white glare? Antarctica?

I said, "No atomic war, I guess."

Tracy said, "It's not that common, anyway. Judging from the early history of the Lost Empire, not one culture in a million blows itself to bits on the way to star travel. Ecological misadventure is much more common."

Like wiping out an entire intergalactic civilization while you're looking for a quicker way to get around? She still wasn't talking about that. Not telling me what an Omega Point might be, or why it'd taken the organic sentiences, but left the robots behind. Maybe someday. Maybe not.

I polled the electromagnetic spectrum. Lots of noise from Earth, just like you'd expect. Try a sample. "Jesus."

Tracy cocked her head at the two sailors on the screen. "Something you recognize?"

"Yah. I guess I didn't expect *Gilligan's Island* would still be in re-runs after half a century."

"Not your language, though."

"Maybe it's dubbed in Arabic or Japanese or something."

I sampled around the solar system, trying to figure out. . . . "Almost nothing. A couple of satellites around Jupiter and Saturn. Hell, I figured on a Mars base by now, at least."

Not a peep from the Moon. No Moonbase? What the fuck. . . .

There was a tinkertoy space station in very low Earth orbit, not even half way to Von Braun's celebrated two-hour orbit. No space-wheel. No spin. No artificial gravity. On the other hand, I was impressed by the big delta-winged shape docked to one end. "At least they've got real space ships now!"

Tracy said, "The remotes show eleven humans aboard."

Eleven. Better than Von Braun's projected seven-man crew for those 1950s ships. "How many aboard the station?"

"Eleven total, between the station and ship." She went deeper into the scan data, and then said, "I think the station is set up to house a three-man crew. That little thing with the solar panels down there is the escape capsule, I guess."

I looked, but didn't recognize it. Smaller than an Apollo, bigger than a Gemini. Kind of, I thought, like a Voskhod with two reentry modules, all wrapped up in some green crap.

I flopped back in the command pilot's chair, and said, "Man, what a bunch of fuckin' duds! They might just as well have had the goddam atomic war and got it over with!"

Tracy smiled, and said, "Maybe you're being a little hard on them."

Getting a little bossy, now that she's full size. Although having her five-feet-eight to my six-foot-nothing made for a *much* more comfortable fuck.

She said, "Are we ready, then?"

I gave the pathetic old Earth a long, long look, thought about Murray, down there somewhere, pushing sixty, and said, "Sure. Let's do it." Get it over with, and get back to something worthwhile.

I sent the signal, dropping the main fleet out of hyperspace, bringing it swinging on in, wave on wave of robot-crewed battleships, wondering what they'd make of it down there, when, in just a minute, the radar screens began to go wild.

And then, not just on every TV, not just on every movie screen, not just on every audio tape, but in the printed words of every book, magazine, and newspaper, on every billboard, on the signs by the side of every road that should've given speed limits and directions, the labels on bottles, the images and text on the boxes of all the breakfast cereals, on magical things Tracy explained to me, the little display windows on electronic calculators (!), on these shiny little thingies called CDs that'd displaced our old LPs, on every page in every browser (not a clue! something to do with "peecees" and what she termed "the Internet"?), all over the world, there was nothing but the face of a fiery God, and the words of his message:

"Behold," he said. "I am coming to punish everyone for what he has done, and for what he has failed to do."

I took a moment to imagine the look on Murray's face right now, another moment to wonder if he even remembered me. When the moment was over, we got down to work.

And so the seed of mankind was parceled out to the trillion worlds of the Lost Empire, a family here, a neighborhood there, this one with a whole nation, that one with no more than a township, a few with no more than a single man or woman, left to wonder just what they'd done to merit such a nightmare punishment, or such a grand reward.

It was a long while before they understood what'd been done to them, longer still before they began to look for one another.

"But that, Little Adam, is another story." ○



THE FALL OF THE KINGS

by Ellen Kushner &

Delia Sherman

Bantam Spectra, \$13.95 (tp)

ISBN: 0-553-38184-9

Here's one for fantasy lovers who're tired of quests and faux medievalism. Kushner and Sherman set this elegant tale in the same world as, but several decades after, Kushner's solo novel *Swordpoint*, in a society that has long since outgrown its mythic past, but can't escape it. The setting is a large university town, the capital of a nation that has a strong British feel, although its history differs in details. The country was once ruled by kings who depended on a council of wizards to keep their policies aligned with the elemental forces on which the kingdom's health depended. But the wizards and kings are gone, replaced by a council of nobles. And just as well—the wizards were after all charlatans, preying on the superstitious age to maintain a position of power over the credulous kings. Or so believes everyone with any sense, especially the academics who specialize in the early history of the realm.

Into this arena comes Basil St. Cloud, a brilliant young academic touted as a leading candidate for the Horn Chair, the most prestigious History position in the university. He casts his fate on the proposition that history has misrepresented the wizards; not only were they the true power behind

the throne, but their role was to employ their powers to preserve a magical link between the ruler and the land itself. The scholarly establishment sides against him, and the battle lines are drawn for a vicious academic turf war, including not just the learned professors but their coteries of students.

Unknown to any of them, the material of their debate is far from academic. Conservative factions of the nobility are watching, ready to initiate legal or military action if the scholars' disputations step over the line into treason. For, as becomes clear, there is strong underground royalist sentiment in the northern provinces, from which the royal house originally came, and while the royalists' agitations may appear harmless on the surface, they could easily become the seed for a genuine rebellion. The nobles realize that the royalists might become especially dangerous if their dreams of a royal heir are given encouragement.

As it happens, in an ancient house across town from the university lives Theron Campion, a restless young gentleman whose family traces its lineage back to the deposed kings. Campion has a voracious appetite for new experiences, which leads him to St. Cloud—both as a mentor and as a lover. While Campion enjoys the new liaison, St. Cloud has stumbled on evidence that he believes fully vindicates his belief that, far from being charlatans, the sorcerers wielded

genuine power through their rituals. Especially convincing is an original wizard's spell book—which St. Cloud decides to translate and put into action as the clinching proof of his thesis.

Kushner and Sherman create a multi-layered urban fantasy world, full of quirky characters and perceptively drawn settings. It borders on cliché to say that the city itself is a major character in the story, but for once the statement is true—and it is equally true of the university, which the authors portray in knowing detail, from its grand buildings and atmospheric pubs to the dilapidated apartments where its scholars live. The plot is worthy of the characters in its convolution and sophistication. In short, a book for readers who enjoy subtlety and craftsmanship along with a full quota of magic and adventure.

THE BRIAR KING

by Greg Keyes

Del Rey, \$24.95 (hc)

ISBN: 0-345-44066-8

The Briar King is the first volume (of a projected four) in Keyes's new fantasy series, "The Kingdoms of Thorn and Rose." This one is set in Crotheny, a kingdom in a fantasy world somehow connected to ours by a gateway to Sir Walter Raleigh's lost Roanoke colony of 1587—a fact reflected by the descent of the ruling family from Virginia Dare, but not (at least not as of the first volume) fully explained.

Keyes begins with one scene providing a glimpse of a key event in the early history of Crotheny: the overthrow of alien overlords and the founding of a world ruled by humans. The narrative then jumps forward to a time when the human dynasties are about to be brought

face to face with the dark powers they have ignored. Remnant populations of other beings, parallel to elves and the like, are still to be found, as are folktales and prophecies that darkly hint at an end to human rule.

Keyes focuses on three appealing characters. All three are young, yet have become very competent within their own fields. Yet all three show considerable innocence regarding the larger world they inhabit. The first is Stephen, a neophyte scholar sent to a monastery where he can study ancient languages. Then there is Neil MeqVren, a young warrior brought to the royal court to be knighted; and finally Anne Dare, a spoiled princess whose main redeeming feature is a streak of tomboy independence. As the novel opens, each of them is on course for what appears to be a conventional coming of age, given their stations in life and their basic character.

But the world they expect to inherit is rapidly falling apart. Several conspiracies are in progress at once, both in the conventional political realm and in the realm of occult magical events. Stephen finds himself the target of hazing by several older members of the order in which he is a novice. And much to his discomfort, his superior is giving him ancient texts to translate, all of which seem to concern unspeakably evil rituals. For his part, Neil encounters opposition among the established knights, many of whom object to a commoner's being raised to their status. After confronting a sudden emergency, he finds himself in a position of great responsibility for which his training has given him no precedents. Anne, for her part, falls in love

with an unsuitable young man, and is sent away to a sort of convent, where she finds herself being trained in the arts of dark magic and assassination.

Keyes weaves together their adventures—and those of several older characters with whom the three main protagonists join forces—to show the chain of events building to a crisis, while still leaving the stage set for the next in the series. Inevitably, there are going to be loose ends—for example, the connection with the lost Roanoke colony, and the meaning of the Briar King (who does figure in this book's conclusion). Keyes nicely balances the conflicting requirements of setting up the subsequent volumes and providing a coherent, rounded book-length narrative. A very promising beginning to a multi-volume work by one of the more accomplished newer writers in the fantasy field.

SNARE: A Novel of the Far Future

by Katherine Kerr

Tor, \$27.95 [hc]

ISBN: 0-312-89045-1

Kerr, probably most widely known as a fantasy writer, turns her hand to an SF novel that carries much of the evocative power of fantasy in its interplay of different cultures and races on a distant planet.

The leading characters of *Snare* are from Kazrajistan, a neolslamic society that follows the Third Prophet. One group, drawn from the Kazrak military, seeks to convince Jezro Khan, their exiled former general, to lead a coup against his brother, the despotic ruler. Their guide is Soutan, a sorcerer who uses crystals to speak to various spirits—or so it appears to the

superstitious Kazraks. At the same time, the ruler's secret police have sent an assassin, Zayn, on a mission to prevent Jezro's return from the Cantons, the distant country where he has taken refuge.

To get to the Cantons (which turns out to have considerable similarities to France), all parties have to cross a broad steppe-like territory inhabited by horse nomads and by roving, often hostile bands of the planet's indigenous race, the Cha'Meech. There, Zayn arranges to be adopted by one of the nomad tribes, led by a woman named Ammadin—a Spirit Rider who has in her possession crystals similar to Soutan's. At first, the assassin is clearly taking advantage of the chance to travel with a group that can take him safely across the steppes; the nomads make regular visits to Canton to sell horses, and by attaching himself to Ammadin (who, by tribal law, is the owner of most of the group's horses) Zayn expects to get himself to his victim more quickly than the rebel group.

The meat of the novel is a series of encounters between members of the different societies on the planet, leading eventually to revelations about the long-forgotten origins of the world's unusual mixture of races and cultures. Kerr makes good use of the various clashes between cultures, setting up expectations based on the earthly societies of which they are analogues and then surprising the reader when the expectations turn out wrong. And, perhaps not surprisingly, the "magic" used by Soutan and by the Spirit Riders turns out to be an example of Clarke's Law in action.

Kerr's characters are complex, evolving personalities, and the societies become more interesting as

one learns more about them. By journey's end, almost all the characters have found new perspectives on their former beliefs, and the societies of which they are members are on the threshold of significant change, as well. A very solid performance—recommended for the reader who wants well-paced adventure *and* something more to chew on.

THE LIFE AND DEATH OF PLANET EARTH: *How the New Science of Astrobiology Charts the Ultimate Fate of Our World*
by Peter D. Ward &
Donald Brownlee
Times Books, \$26.00 (hc)
ISBN: 0-8050-6781-7

Here's a sobering look at scientific truths most science fiction very deliberately ignores: the long-term prognosis for our world, and not incidentally for our own species. Not that there's any drastic shortage of far-future SF—in fact, a good fraction of the most interesting work in the field has always been set in an era so far down the timestream that few remnants of our civilization survive. But very little of that work takes its setting very seriously. Like most SF settings, the far future is often no more than another stage on which to turn loose an adventure story with characters and a plot that could just as easily have been set on the sea coast of Bohemia.

Ward and Brownlee aren't interested in comfortable images of the human race somehow surviving and persevering over the forces of nature. That might happen, or it might not; what they do here is lay down the conditions that we (or more accurately, barring the sudden discovery of cheap and practical immortality, our descendants)

are going to face. In particular, in a time that seems long by human standards but is very short in geological terms, the habitability of the planet is going to become a significant issue.

We're not just talking global warming, although that will undoubtedly have important effects on the human species. Longer term, the climate for the last several million years has been bouncing between temperate and frigid conditions; we're living in a brief period of pleasant climate, not to be taken as any sort of guarantee of future conditions. There is no reason to believe that we are going to be able, in the long run, to escape another glacial period of the sort that covered half of the northern hemisphere with ice only a few thousand years ago—if not an even more severe "snowball Earth" such as the world may have experienced at least twice before the Cambrian period. And barring significant technological advances, we have about as much ability to do anything about a return of the ice as our Cro-Magnon ancestors did.

That's just the beginning of the bad news. In the longer run, plate tectonics will put its hand in, driving the current continental masses together into a single supercontinent, setting off a runaway greenhouse effect that makes current global warming look like Indian summer. In the long run this can be expected to kill off almost all multicellular life on the planet. (Bacteria and some other simple organisms may survive a very long time.) Things don't stop there; eventually the sun becomes a red giant, swallowing what's left on Earth and making the environment unsafe for life well out into the solar sys-

tem, before shrinking back to a white dwarf. Can our species survive all this? Perhaps—although it'll take a greater and longer-range commitment of resources than anything in history. The authors aren't convinced we can put our internal squabbles aside long enough to pull it off.

SF writers have generally dodged the long-term prognoses Ward and Brownlee outline, although much of their material has been known to scientists for decades. It will be interesting to see if any writers respond to this book, which is in a sense the ultimate reality check for SF—and for the aspirations of our species as a whole.

SIX DEGREES: *The Science of a Connected Age*
by Duncan J. Watts
Norton, \$27.95 (hc)
ISBN: 0-393-04142-5

We've all played (or run screaming from those who play) the film-buff's game, "Six Degrees of Kevin Bacon." Here's a book that not only takes the game seriously, but explains why it works and how that insight applies to a much larger (and considerably more interesting) class of phenomena.

Watts is one of the young turks of network theory, a science combining the results of several disciplines. To begin with basics, the nature of a network is determined not by its individual members but by the form of their connectedness. In other words, all networks have structural features in common, whether their individual components are people, computers, or even the neural cells of nematode worms.

For example, the "Six Degrees" game (to generalize it beyond Kevin Bacon) claims that within a

small number of steps one can find a connection between any two people in the world—for example, between a Vietnamese farmer and a cellist in the Leningrad symphony. What makes the theory work is the fact that both these figures have close acquaintances who move beyond their own immediate circle. The farmer may know a grain agent who regularly goes to a nearby city, where he deals with a merchant whose sister runs a restaurant patronized by . . . but you can use your own imagination. Or better yet, let Watts show you in detail how even one or two members of the local circle who know someone outside their immediate neighborhood can lead to tight interconnectedness between almost all the members of the larger universe.

Watts summarizes several areas of research—by mathematicians, biologists, and physicists, giving memorable pictures of the individuals involved as well as of their ideas. A fair amount of the material comes from everyday experience. For example, the mechanism that starts a large crowd clapping in unison, without any signal, also lets all the crickets in one meadow synchronize their chirping. Computer viruses spread in much the same way as the flu, and the 1996 failure of the power grid of the western U.S. was an object lesson in how tinkering with connections in a network may turn out to be completely useless when the entire structure comes under stress.

Very well written, full of surprising insights—a good look at an emerging discipline from the point of view of one of its central figures. Especially useful is the extensive bibliography, graded by degree of mathematical difficulty. ○

SF CONVENTIONAL CALENDAR

Join Toronto's World SF Convention at the door—it's too late for advance. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For an explanation of con(vention)s, a sample of SF folksongs, info on fanzines and clubs, and how to get a later, longer list of cons, send me an SASE (self-addressed, stamped #10 [business] envelope) at 10 Hill #22-L, Newark NJ 07102. The hot line is (973) 242-5999. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con 6 months out. Look for me at cons behind the Filthy Pierre badge, playing a musical keyboard.—Erwin S. Strauss

AUGUST 2003

- 8-10—**ArmadilloCon**. For info, write: Box 27277, Austin TX 78755. Or phone: (512) 477-6259 (10 AM to 10 PM, not collect). (Web) www.fact.org. (E-mail) armadillocontx@yahoo.com. Con will be held in Austin TX (if city omitted, same as in address) at the Hilton North. Guests will include: K. Baker, Groell, Picacio, Siros, Aileston, V. Vinge, Varley, Waldrop.
- 8-10—**ConGlomeration**. www.members.iglou.com/shadow/conglomeration. Hurstbourne, Louisville KY. Flint, Pollack.
- 8-10—**OtaKon**. (810) 291-5308. www.otakon.com. Conven. Center, Baltimore MD. F. Schodt, Robert DeJesus. Anime.
- 8-10—**TatraKon**. (053) 446-7614. www.tatracon.host.sk. Sporthotel Relax, Slovenskon, Slovakia. Week starts Aug. 4.
- 9-10—**Trek Celebration**. (913) 441-9405. www.sfedora.com. Crystal City Doubletree, Washington DC. Commercial con.
- 15-17—**ConTemplation**. (573) 474-6161 (hotel). Best Western, Columbia MO. M. Reichert, Ray Van Tilburg, the Reeds.
- 18-22—**Bill Blair Birthday Cruise**. (818) 558-5884. Miami/Mexico on Carnival Fascination. Bill Blair, Peter Mayhew.
- 20-24—**Feral**, Box 47006, Mississauga ON L5K 1T9. www.campferal.com. Kinark Outdoor Center. Furry camp event.
- 21-24—**Poland Nat'l. Con**, c/o M. Grygiel, Box 20, Elblag 13 82312, Poland. www.gabo.pl/~fremen/polcon2003.
- 22-24—**ConVersion**. www.con-version.com. president@con-version.org. Calgary AB. Robert Sawyer. 20th annual.
- 22-24—**BuboniCon**, Box 37257, Albuquerque NM 87178. (505) 266-8905. www.bubonicon.home.att.net. HoJo East.
- 22-24—**Anime Iowa**, Box 5303, Coralville IA 52241. www.animeiowa.com. Collins Plaza Hotel, Cedar Rapids IA.
- 22-24—**ConDerosa**, Box 53115, Oklahoma City OK 73105. conderosakc.tripod.com. LaQuinta. General SF/fantasy.
- 22-24—**ShoujoCon**, 675 VFW Parkway #322, Chestnut Hill MA 02467. www.shoujocon.com. Hilton, Rye NY. Anime.
- 22-25—**Phoenixfiles**, Box 1701, London SE19 3XU, UK. (07817) 092-723. Radisson Heathrow. N. Nichols. Star Trek.
- 23-24—**Creation**, 1010 N. Central Av., Glendale CA 91202. (818) 409-0960. Marriott, Brooklyn NY. Commercial show.
- 28-Sep. 1—**TorCon 3**, Box 3, Stn. A, Toronto ON M5W 1A2. www.torcon3.on.ca. Press. WorldCon. C\$250+/US\$170+.
- 29-31—**Fantastic Films Festival**, 95 Meadowgate Rd., Manchester M6 8EN, UK. (+44 0161) 707-3747. Renaissance.
- 29-31—**MephIt Furmeet**, Box 6001, St. Louis MO 63139. www.mephitfurmeet.org. Airport Holiday Inn, Memphis TN.
- 29-Sep. 1—**DragonCon**, Box 16459, Atlanta GA 30321. (770) 909-0115. Hyatt. Anne McCaffrey. Gaming/comics. Big.
- 30-Sep. 1—**Dark Shadows Festival**. www.darkshadowsfestival.com/page02. New York NY. For fans of the TV show.

SEPTEMBER 2003

- 5-7—**CopperCon**, Box 62613, Phoenix AZ 85082. (480) 432-0649. www.coppercon.org. Embassy Suites No. C. Willis.
- 5-7—**VulKon**, Box 297122, Pembroke Pines FL 33029. (954) 441-8735. Holiday Inn, Independence OH. Commercial.
- 12-14—**GateCon**, Box 76108, Colorado Springs CO 80970. (719) 574-6427. Best Western, Richmond BC. Stargate con.
- 12-14—**JVLCon**, 1316 Monterey Ln., Janesville WI 53546. (608) 756-5525. www.si-fi-nut.com/jvl-con. Ramada Inn.

SEPTEMBER 2004

- 2-6—**Noreascon 4**, Box 1010, Framingham MA 01701. www.noreascon.org. Boston MA. Wm. Tenn. WorldCon. \$160.

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- 4-8—**Interaction**, Box 58009, Louisville KY 40268. www.interaction.worldcon.org.uk. Glasgow UK. US\$135/£85.

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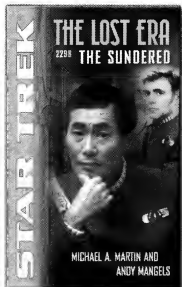
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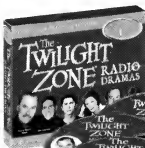
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